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A Weekly Newspaper Devoted to the Industrial, Financial, Railroad,
Mining, Contracting, Engineering, Building, and General
Business Interests of the South and Southwest

Vol. 67
No. 21

ESTABLISHED 1882

\$4.00 per Year
Single Copy 15 Cents

Significance of the Meeting of Pan-
American Financiers at Washington.

Important Construction Work Under
Way in North Carolina.

Additional Indications of Reviving
Activities.

Taking Stock of Southern Resources.

BALTIMORE, MAY 27, 1915



First Aid to the Boiler Room

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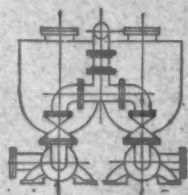
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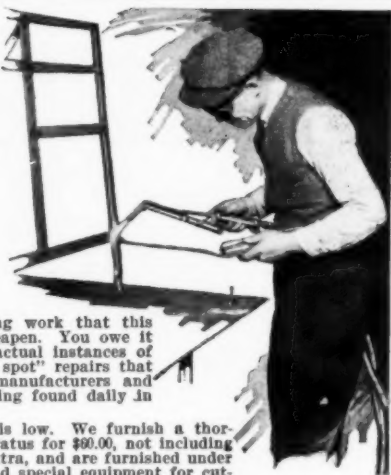
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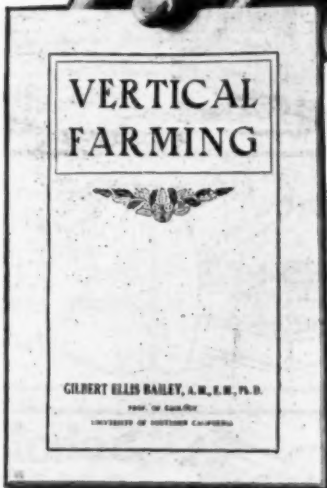
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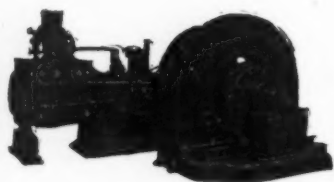
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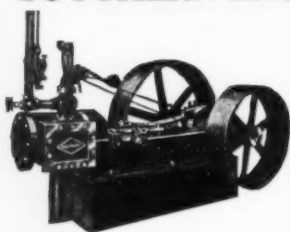
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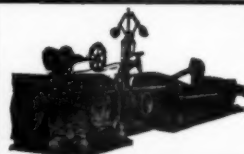
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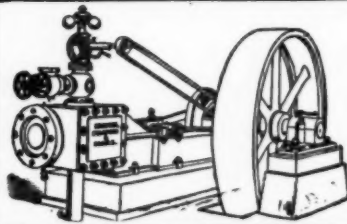
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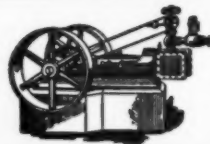


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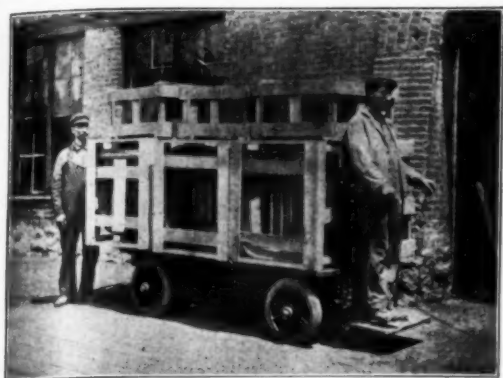
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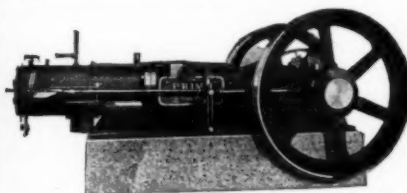
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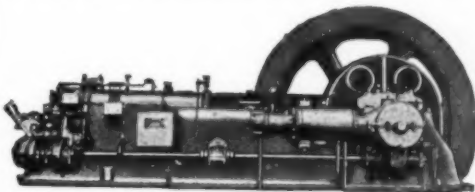
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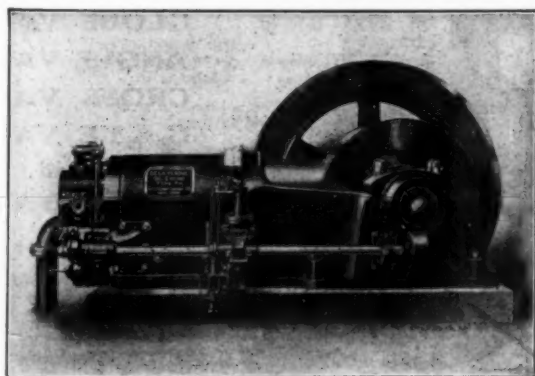
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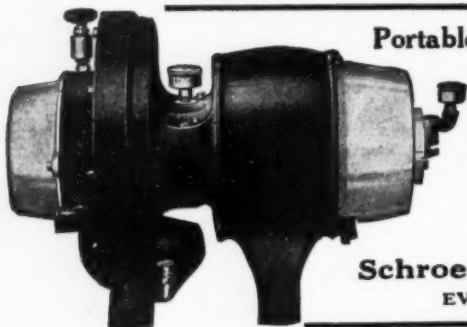
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Complete combustion. Arrangement of tubes gives the water very rapid circulation. Steam capacity

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are EFFICIENT boiler feeders. They will deliver more water per pound of steam than any other, which means a saving in fuel; will restart instantly after a temporary interruption of either the steam or water supply, and the

amount of water delivered can be graded over 50 per cent.

The scientific proportion of the tubes and the special bronze composition used, minimizes the wear and prolongs their life.

All parts are renewable, making the Injectors practically indestructible.

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Total cost of investment, \$833.00.

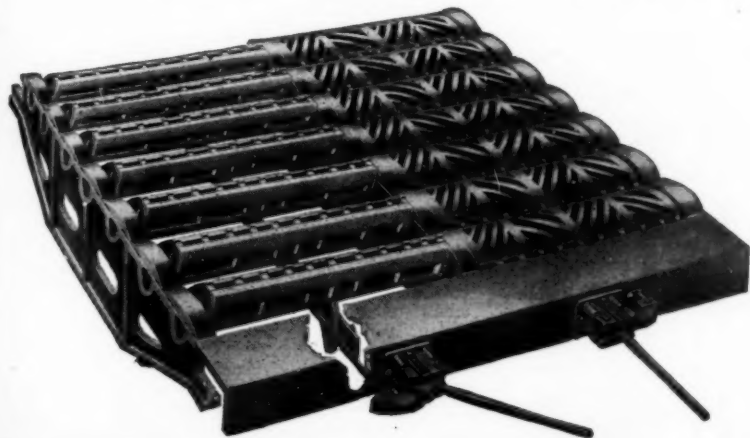
Steam increased from insufficient to pull the bottom of the mine without shutting down a portion of the washer, to ample supply for all purposes.

Labor for both firing and cleaning reduced to the minimum.

Saved in four months over common bars, \$700.00, as per following test:

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	Coal Burned.	Coal Mined.		Coal Burned.	Coal Mined.
May, 1913.....	812 tons	7,276 tons	September, 1913.....	722 tons	7,457 tons
June, 1913.....	768 tons	7,013 tons	October, 1913.....	709 tons	7,910 tons
July, 1913.....	722 tons	6,167 tons	November, 1913.....	697 tons	7,935 tons
August, 1913.....	740 tons	6,751 tons	December, 1913.....	690 tons	7,568 tons
Four months.....	3,042 tons	27,207 tons	Four months.....	2,878 tons	30,870 tons
	Fuel Cost per ton, .14			Fuel Cost per ton, .117	

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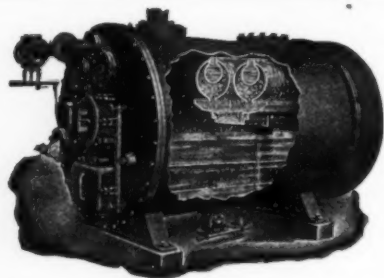


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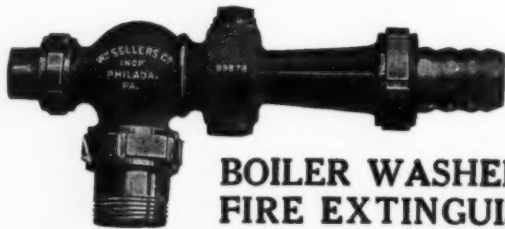
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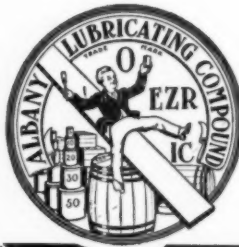
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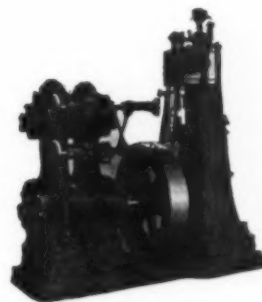
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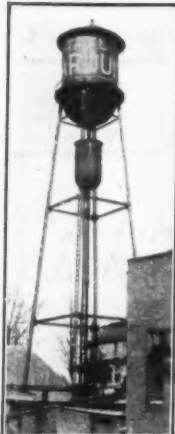
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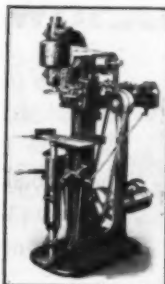
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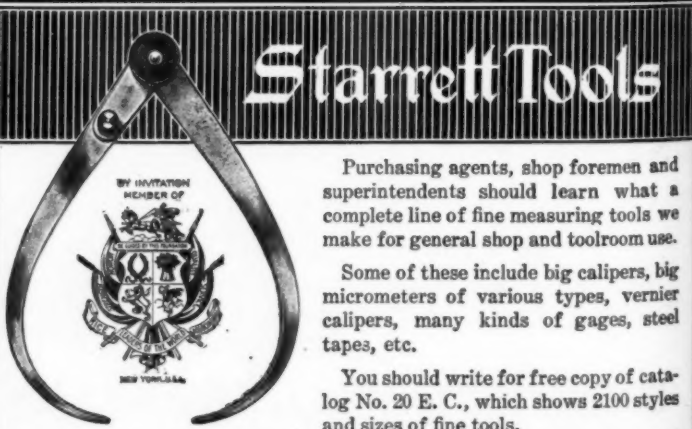
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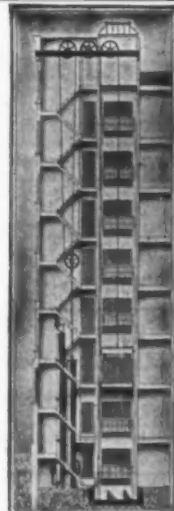
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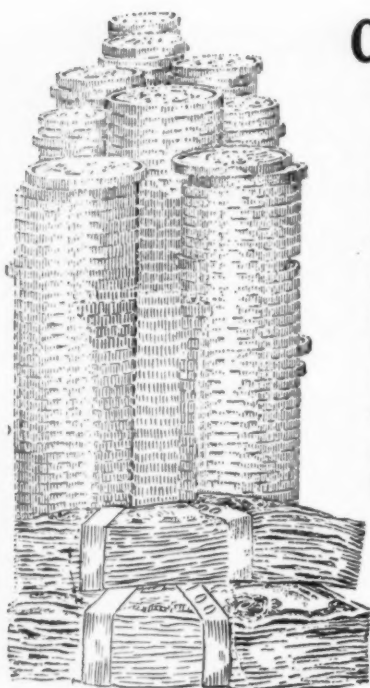
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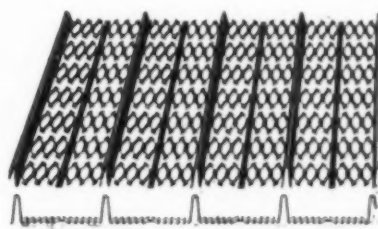
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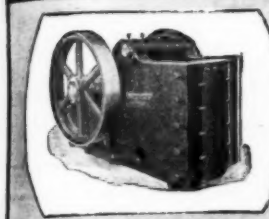
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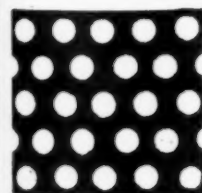
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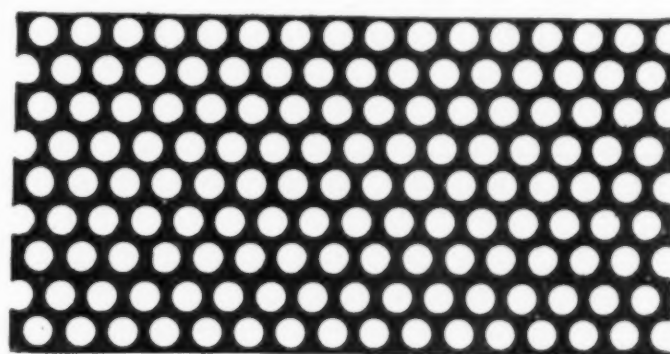
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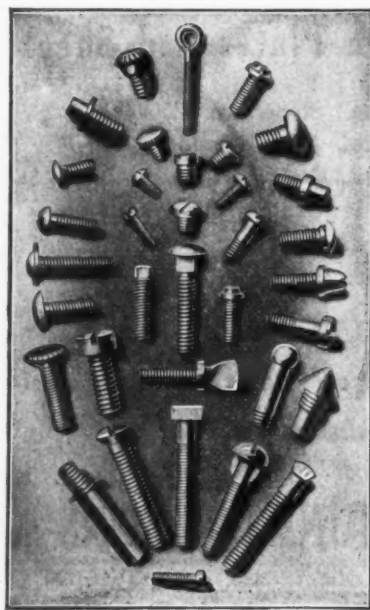
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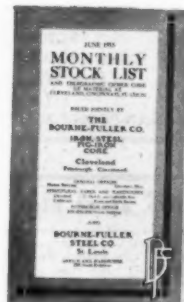
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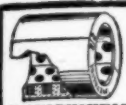
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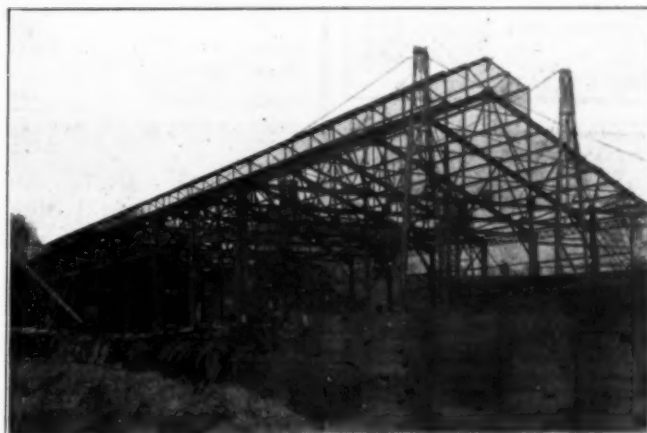
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Southern Wheel Company's Plant, Atlanta, Ga.

STRUCTURAL STEEL

FOR BRIDGES, BUILDINGS, ETC.

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For Fruit Packages, Baskets, Crates, Barrels, Butter Dishes, Boxes, etc. Corrugated Joint Fastener Driving Machinery.

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Workmanship Guaranteed.

"Vignola" is our standard for proportions when architect's details are not furnished.

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Plain Rounds and Squares or Twisted Squares

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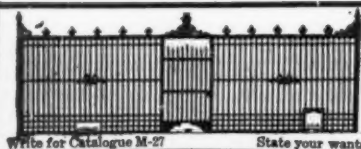
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BRASS AND STEEL WIRE WORK OF EVERY DESCRIPTION
Absolute Prompt Delivery.

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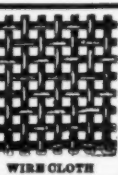
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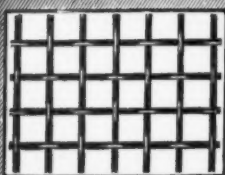
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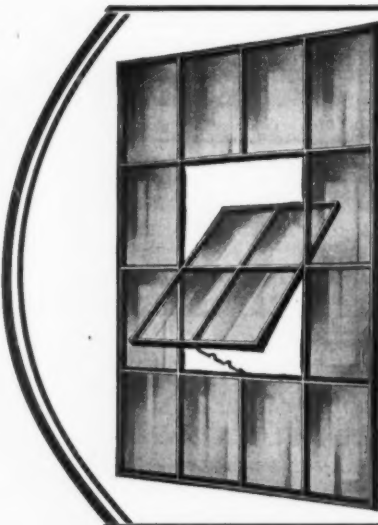


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fire-proof walls and floors
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Made of galvanized iron or
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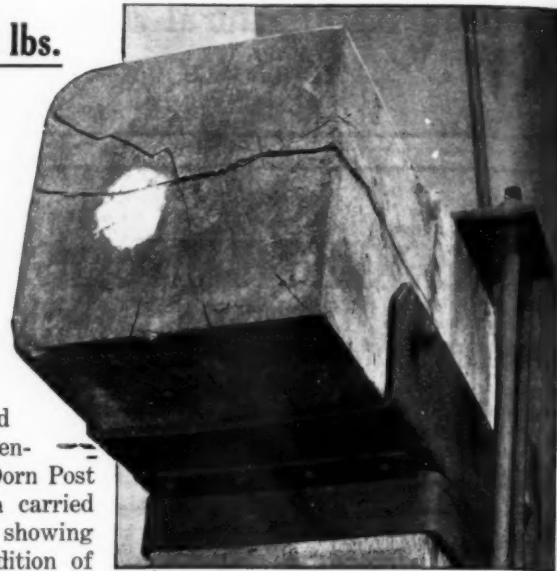
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One-half the amount of our Mortar
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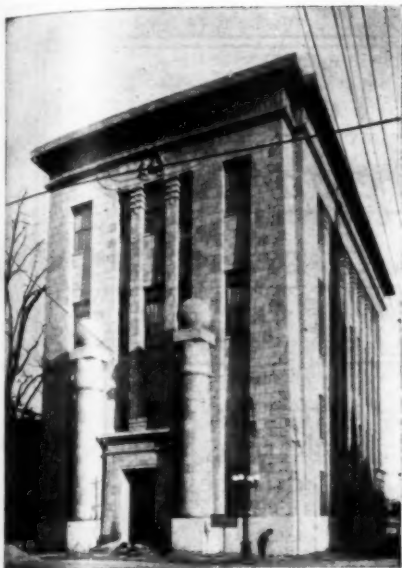
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Discriminating Architects Specify

KINGSPORT Vari-Colored
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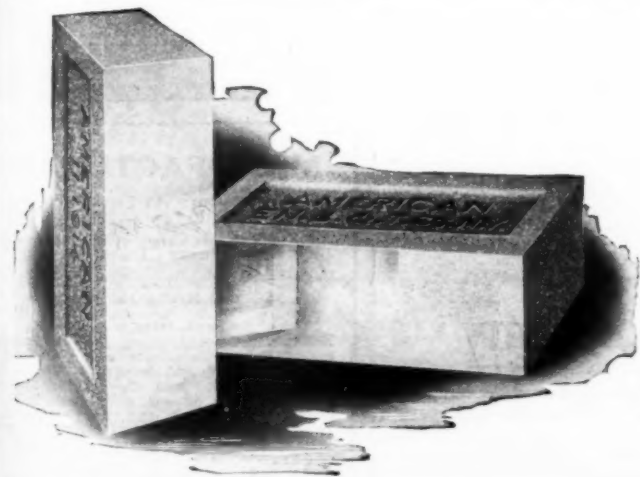
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Enameled Brick in Color Awaits You

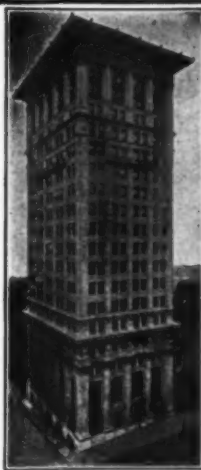
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Engineers; Builders of Green's Fuel
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STONE**

**SAWED, PLANED
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Estimates Promptly Furnished.
F. O. B. Bedford or delivered.

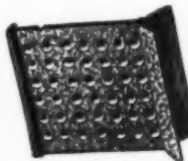
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Building Tile—Sewer Pipe—Fire Clay

Fireproofing, Flue Lining, Stove Flue Pipe and Tops, Thimbles, Wall Partition Tile,
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Niagara Galvanized Wall Plugs

For Building into Walls as a Base for Nailing. A first-class job can be done with them for less money than an inferior job without them.

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"Like a Stone Wall to Rust & Corrosion"

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It is five, ten or many more years hence that will indicate the true quality of metal roofing. How a metal roofing material will stand the test may be anticipated by past performances.

PORTSMOUTH IRON ROOFINGS

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Contain the essentials of lasting durability. And they are correctly combined to withstand the test of time. Several years have failed to show any perceptible effect on many roofs that were covered with Portsmouth Iron—and Portsmouth Iron today is made even better than ever. More service than this material will give your roofings could hardly be desired. Write for descriptive booklet.

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Prices of pipe and sheets run pretty much the same, but quality varies with different manufacturers.

In order to get unvarying quality buy

La Belle Sheets La Belle Pipe

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Be shrewd enough to investigate these claims when next in the market.

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TIN PAINTED METAL SHINGLES GALVANIZED

With Improved "Lock That Locks." Watertight—Fireproof—Durable—Economical
Best and Cheapest Made by

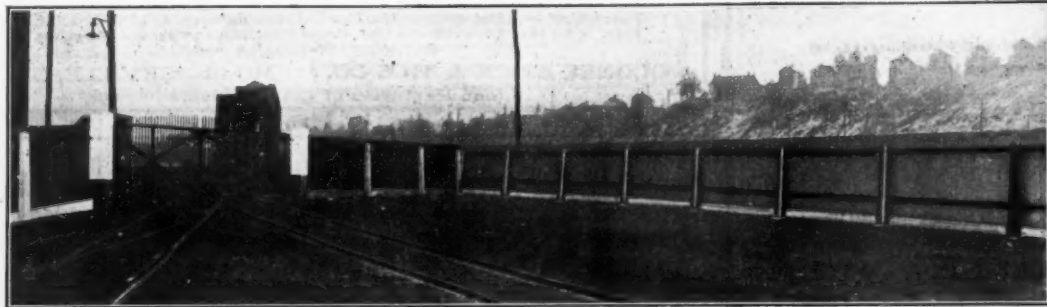
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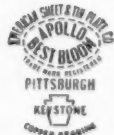
Mine-Run Screenings for Concrete and Road Construction
AMERICAN BALLAST COMPANY

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Permanency—Privacy—Dignity are all combined in the New Corrugated GALVANIZED-Concrete Fence



Something decidedly better for enclosing manufacturing plants and grounds.
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Non-Metallic Flexible Conduit

**Double Compounded
Seamless Interwoven**

With its interwoven and inseparable smooth interior, no matter how badly crushed or kinked, you can straighten it out and run a wire through it with ease.

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No. 1 BLUE

VARIEGATED

VIRGINIA RUSTIC

(In Extra Thickness)

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PRODUCERS OF
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Made of Galvanized and Painted Tin

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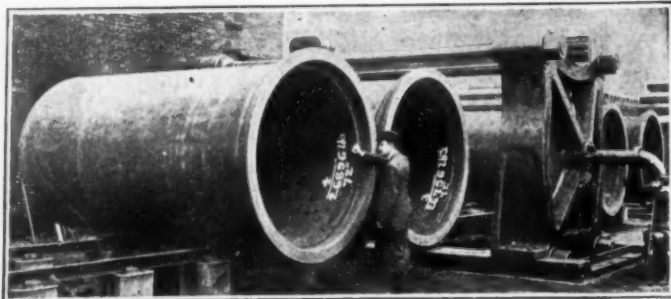
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Branch Office and Warehouse, 1625-27 Pacific Avenue, Dallas, Texas.

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72-inch Pipe at Hydraulic Test Press. Each Length of our Manufacture is Tested by Full Water Pressure before Shipment.

The earliest Cast Iron Pipe on record was laid in 1664—250 years ago—and is still in service. Substitutes for cast iron last from 5 to 25 years, and give unsatisfactory service even through this short period.

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ALL REGULAR SIZES—2-INCH TO 84-INCH

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STANDARD RE-INFORCED SPIRAL PIPE

Continuous Interlocking Seam Smooth Inside

USED FOR

Water, Air, Exhaust Steam Dredging, Irrigation, Paper and Pulp Mills, Brine Circulation, and suitable for the economical conveyance of any liquid or other substances.

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Salt Glazed Sewer and Culvert Pipe

Wall Coping, Drain Tile, Flue Lining, Chimney Tops, Hollow Tile, Fire Proofing, Vitrified Brick, Fire Brick.

BANNON'S PATENT LIDDED PIPE FOR STEAM CONDUITS

P. BANNON PIPE CO.,

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SEWER PIPE

Send your inquiries to the

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MADE OF FIRE CLAY

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WYCKOFF WOOD PIPE

Saves Money For You

Its first cost is much lower than Cast Iron. Will not freeze. Easy to handle and cost of laying $\frac{1}{3}$ that of Cast Iron Pipe, and lasts as long. Sizes—1 inch to 48 inches in diameter. Pressures—10 lbs. to 172 lbs.

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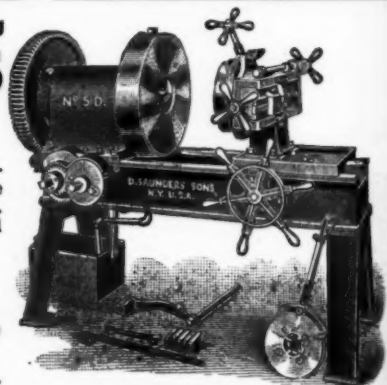
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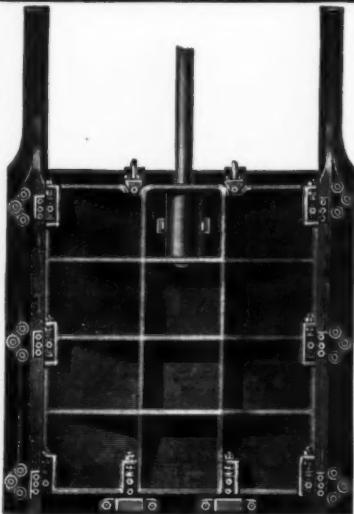
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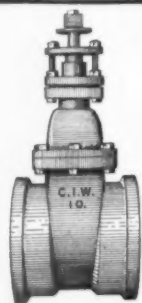
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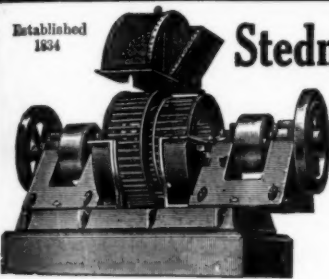
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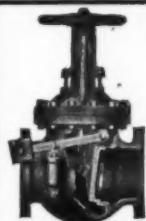
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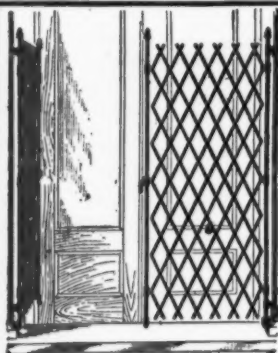
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Trade-Name Registered in the U. S. Patent Office

Vol. LXVII. No. 21.
WEEKLY.

BALTIMORE, MAY 27, 1915.

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AMERICAN IRON AND STEEL INSTITUTE.

THE American Iron and Steel Institute meets this week in New York under conditions unprecedented in the history of the iron and steel trade. Since its first formal meeting in October, 1910, the gatherings of the Institute twice a year have come to be regarded as having an important bearing upon the material progress of the country. Its membership represents an industry which has increased the value of its annual output of primary manufactures since 1880 from \$300,000,000 to \$1,500,000,000. The meetings have attracted the great leaders of the industry not only in the United States, but in foreign lands, and the proceedings have included not merely technical papers of special interest to the members, but more general papers or informal speeches of profound interest to the whole country. At this week's New York meeting there will be presented but five technical papers, all by men in active work in their profession. President Elbert H. Gary is to make the opening address, and what he may say will undoubtedly be heard with profound interest. Second in importance only to President Gary's address will be, perhaps, the paper on welfare work of the Tennessee Coal, Iron & Railway Co., a line of activity to which the United States Steel Corporation and its subsidiaries have devoted much time, energy and money in recent years. The corporation is now spending something more than \$7,000,000 a year for accident relief, accident prevention, sanitation and welfare, pensions, additional benefits, etc., and at the Panama-Pacific Exposition it has an exhibit divided into fourteen parts, showing organization, safety, first aid and rescue, voluntary accident relief, hospitals, sanitation, mill restaurants and lunchrooms, housing, gardens, district and visiting nursing, recreation, education and other phases of welfare work.

TAKING STOCK OF SOUTHERN RESOURCES.

REFERRING to a recent exhibit in the MANUFACTURERS RECORD of mineral, forest and agricultural resources of the South and of the annual value of primary products from such resources as indicative of the work to be done in the South, the Atlanta Journal says:

The tasks that press upon the South are the tasks that press upon Georgia. The development of our water-powers, the conservation of our forests, the improvement of our farming system, the reclamation of our swamp lands, the building of good roads—in short, the use of the manifold treasures about us—this is the work to which the State's energy and vision should be constantly turned.

All that is true and is applicable, not merely to Georgia, but to every State in the South. Not a single one of the sixteen States has really begun to

realize upon its natural resources in a manner and to an extent proportional to the opportunities, with the exception, perhaps, of timber and some leading minerals, such as coal and iron and phosphate rock. Vast stores of peat and of lignite which, if properly handled, would tend to retard the drains upon other fuel resources are still virtually untouched. Beds of rock salt and of sulphur of unmeasured extent have been exploited more or less, but principally in the obtaining of primary products and with little endeavor in the way of developing great chemical industries based upon them. The same may be said of lead and zinc and copper and of a variety of clays.

Continuous inroads upon the forests are made, with no provision for reforestation, except to a limited degree. It is only necessary to follow the trail of the movement of the center of yellow-pine lumber production in the South and to study the shifting of the naval stores industry to appreciate how shortsighted has been the policy which has prevailed in this particular.

All the economies in the world can result only in pushing a little farther into the future the limit of production of most minerals. And although no man is living who will live long enough to witness the exhaustion of any mineral deposits of importance in any Southern State, and although the time between now and the date of such exhaustion of many minerals must be measured by centuries instead of by years, there is, of course, a limit to the production of all minerals. On the other hand, the supply of timber need never come to an end, and the proper use of the wonderful soils of the South involves a constant and steady increase in their productivity.

Hydro-electric development of the potential 20,000,000 horse-power in Southern streams is bound to further reasonable and practical conservation of both mineral and timber resources and to facilitate the growth of electro-chemical and electro-metal-lurgical industries of many kinds.

But all the desired ends can be reached only through intelligent and comprehensive study by citizens of the natural wealth of their respective States, as it were, taking careful stock, and by cultivating and encouraging wise policies of government that will eliminate existing difficulties and throw no obstacles in the way of full development.

ALABAMA'S INDUSTRIAL ARTERIES.

ON the front page of the "Birmingham-on-the-Warrior-River" of the Birmingham Ledger is a map of Alabama upon which is traced in red ink the waterways system of the State. The general effect resembles that of a diagram of some great arterial system. As a matter of fact, and in view of the wonderful hydro-electric potentialities of this waterway system, the map may well be regarded as a diagram of Alabama's industrial arteries. That idea is embodied in a letter to the MANUFACTURERS RECORD from James J. Smith, publisher of the Birmingham Ledger, in which he says:

Our people have hardly begun to appreciate the immense value of our waterways and water-power and the necessity for development along safe lines. The opening of Lock 17 is a great event in our industrial history, and we have endeavored in this number—which is to be distributed in our own and foreign trade centers—to show plainly our resources and opportunities. We all know in a general way of the richness of our State in fertile lands, iron, marble, lumber, as well as coal, but none of us fully realize how valuable to us are the water-power and cheap transportation of our streams. They are the State's most precious assets. The consummation of this river improvement is a matter of keen interest to the Ledger, which has given it help, in season and out of season, during the whole of its life.

"AMERICA FOR HUMANITY"—THE PAN-AMERICAN CONGRESS.

NEARLY a quarter of a century ago—or, to be exact, in 1889—a Pan-American Congress, called by President Cleveland, was held in Washington. The development of closer relations between the United States and Central and South America inaugurated by that conference now finds a larger fulfillment in the conference in session in Washington.

The present conference is not only of vast importance in its possibilities for North and South America, but for the world. The people of this country as a whole have comparatively little understanding of South America. Business men who have had trade relations with the countries of South America know something of their vast resources and of the high development of their civilization, but our country at large has too little conception of their greatness. This greatness consists not so much in the immensity in the area and of the resources of South American countries, but in the greatness of their work for civilization and for world peace.

At the Pan-American Congress in 1889, when it was thought that the slogan "America for Americans" might be the order of the day, the Argentine commissioners proposed a broader platform, viz.: "America for Humanity." This was on a par with the remarkable work which was done by Argentina and Chile in the settlement some years ago of their disputed boundary line. When war seemed imminent, the wiser men of those countries succeeded in bringing about an agreement to settle by arbitration a question which had aroused bitter antagonism and for the settlement of which armies were being raised and equipped, and having settled this dispute by arbitration, Argentina and Chile bound themselves forever to settle all other disputes in the same way.

Indicative of the civilization and Christianity of these countries is the monument erected on one of the highest passes of the Andes on the dividing line over which it had been expected that contending armies would march and fight. At an elevation of some 13,000 or 14,000 feet, in a mountain pass constantly used by the travelers between these countries, there was erected a heroic figure entitled "The Christ of the Andes," with one arm bearing the cross and the other stretched out as in benediction. This great figure typifies the spirit which had brought peace to Argentina and Chile and which had bound these countries into perpetual peace. Cut in the foundation stone of this monument are the words:

"Sooner shall these mountains crumble into dust than Chileans and Argentines shall break the peace, which, at the feet of Christ the Redeemer, they have sworn to maintain."

The settlement of this boundary dispute by arbitration and the erection of this great figure of "The Christ of the Andes" were in keeping with that suggestion made by Argentina in 1889, that the motto of the Pan-American Congress should be "America for Humanity."

We are accustomed to read about the immensity of the area of South American countries, and yet probably not one man out of one hundred, on the average, knows that Brazil is 10 per cent. larger than the United States, excluding Alaska and our island possessions. The total area of continental United States is about 2,900,000 square miles; that of Brazil over 3,200,000 square miles. As against the 3000 miles of the United States from the Atlantic to the Pacific, Brazil's territory stretches in breadth 4000 miles and in length over 2000 miles.

The wonderful Amazon River, draining a large part of this mighty country, is well known, even from school-boy days, to most of our people. But

there are many who do not know that the Parana River, forming in the distant regions of Brazil, runs through Argentina; is 3000 miles long, is navigable for over 1800 miles, and, according to the statement of the distinguished American engineer, E. L. Corthell, who was for some years the engineer for Argentina's public improvements, has a much greater discharge of water than the Mississippi River. There are in Argentina great waterfalls that engineers report as far exceeding in magnitude and in grandeur Niagara Falls.

Some fifteen or sixteen years ago the well-known political economist, Edward Atkinson, in an article in the MANUFACTURERS RECORD, stated that, after many years of investigation as to the cotton-growing resources of the world, he was satisfied that there was no other country on earth, except possibly Argentina, which, for half a century at least, would be able to dispute the monopoly of the South's cotton production. Argentina he regarded as a possible rival whenever its population had increased to such a point as to provide the needed labor for cotton growing.

The remarkable growth of Buenos Aires, with its magnificent buildings, its preminence over any other city in the world in many important things and its amazing growth are generally understood in this country. And yet it is probably not generally known that the total commerce of Argentina is about three times as much per capita as that of the United States. With 100,000,000 people we have a foreign commerce of something over \$4,000,000,000 a year, or about \$40 per capita. Argentina, with approximately about 8,000,000 population, has a foreign commerce of \$900,000,000, or more, per year, or an average of about \$100 per capita.

It is well that the people of this country should fully understand not only the magnitude of the area of South American countries, their marvelous agricultural and mineral and timber resources, their vast rivers and their limitless water-powers and other material things which give the foundation for mighty expansion in industry and commerce, but it is still more important that we should properly understand the spirit of the leading South American countries, which in their development of civilization have taken a foremost place in the world in the settlement of disputes by arbitration and in the development of the spirit of making America stand for the best interests of humanity.

The conference now in session in Washington is, therefore, fraught with world importance. It is not merely a conference which will doubtless lead to a better acquaintanceship between the people of North and South America, strengthening the ties of friendship and vastly increasing business interests, but it will doubtless have a far-reaching effect in furthering the work of North and South America in the development of that spirit of peace typified in Argentina's suggestion twenty-four years ago of "America for Humanity" and in the heroic statue "The Christ of the Andes" as the Prince of Peace. This conference, doubtless called primarily by Secretary McAdoo with a view to development of financial and commercial interests between the United States and South America, may not only accomplish this much-desired end, but may have a more far-reaching effect in uniting these countries into closer bonds for the encouragement of world peace.

The delegates for the United States to the Washington conference, we take it, are cognizant of all the rich material resources of South America as far as known. We take it they are cognizant of the extent of the industrial and commercial development already made by these countries. These are important facts to be known and appreciated. It is equally as important that the delegates appointed on behalf of this country should measure up in broad business statesmanship and in an appreciation of what South American countries have largely achieved in setting the world an example of the possibilities of arbitration in the settlement of international disputes, and in lifting high for the study and the thought of the world the spirit illustrated in the motives which prompted the erection of the monument, "The Christ of the Andes," and in cutting into the imperishable stone the pledge:

"Sooner shall these mountains crumble into dust

than Chileans and Argentinos break the peace, which, at the feet of Christ the Redeemer, they have sworn to maintain."

THE TIME FOR THE SOUTH TO ADVERTISE ITS TOURIST ADVANTAGES.

NO one can have noted the advertising pages of the leading papers and magazines of the country during the last few weeks without having been impressed with the exceptionally attractive advertisements that are being carried by the New York, New Haven & Hartford Railroad in the interest of New England as "The Vacation Ground" of the country. The advertisements themselves, in style and wording and display, have been worthy of the magnificent work that this and other roads of New England have for years been doing in behalf of the development of the tourist business of that section.

Some years ago it was estimated that the tourist crop of New England was annually worth over \$60,000,000 to that section. If these figures were correct at that time, they have enormously increased since, for by reason of the broad work of the railroads and the hotels and the people of New England all combining to emphasize the attractions of that country for summer tourists, there has been a steady expansion in the crop harvested.

It is said that the particular advertisement which recently appeared in so many of the leading daily papers and magazines of the country cost the railroads who got it up \$70,000 or more. But that is apparently only a small part of the money that they are spending, for that probably does not include circulars and folders and other literature which have been so widely distributed, nor other advertisements which may appear from time to time.

An expenditure of this kind is typical of the spirit with which New England and the people identified with its development have carried out the campaign which has made that section the tourist region of America. New England has spent not only millions, but tens of millions of dollars to better its roads in order to make motoring attractive to the visitors. It has provided every possible facility in the way of accommodations from the inexpensive to the most elaborate and expensive. It has realized that there is no better business in which it can engage for its own profit, as well as for the broadening of the knowledge of the people of the country of the attractions of that section, than the development of the tourist business.

The South and Southern railroads may well learn a lesson from the work that is being done by railroads, by individuals and by States to develop the ever-growing tourist business of New England. The mountain regions of the South afford almost unlimited opportunity for the development of the tourist business during the summer months. This business ought to be doubled, and could easily be doubled, if it was handled as broadly as that of New England. The winter-tourist business to the Sand Hill regions of the South, to Florida and the Gulf coast and other points could easily be doubled if the same broad expenditure and broad treatment of the whole subject as in New England should be given to the development of this business.

As yet the South has scarcely commenced to realize on its winter climate as an asset. This asset can be developed to produce a crop not simply of \$60,000,000, such as that reported of New England, but of a good many times \$60,000,000.

Some months ago the MANUFACTURERS RECORD published a detailed statement from an American correspondent then in Europe, showing that Italy annually receives \$700,000,000 from its tourist business. The Italian Government and the Swiss Government have for many years given much of their energy to the development of this business.

It is more important now than ever before that every effort should be made by the South to enlarge its tourist business and to bring to this section the tens of thousands of Americans who in the summer time have flocked to all Europe and in winter time have helped to crowd the winter resorts of Italy and other Mediterranean cities. Facilities from the most inexpensive to those of the very highest and most expensive kind should be provided. State Governments should take hold of the situation in

order to see that the boarding-houses and hotels which cater to this trade are in proper sanitary condition and are properly managed, in order that those who become the guests of the South in this way shall have the very best facilities that can be provided, whether they be expensive or inexpensive.

It is incumbent upon the railroads, notwithstanding their shortage of revenues, to recognize that a wise expenditure and the broadest kind of advertising are absolutely essential to the development of this business. To reduce their expenditures at such a time as this is shortsighted in the extreme. Rather should they stretch every point, and with a bold, aggressive stand undertake to so cultivate the attention of the American public as to make certain that this section will overcome by an ever-increasing tourist business any erroneous impressions about the South and setting it in its true light. The situation is such that bold, broad, vigorous work on the part of the Southern railroads and Southern people is needed, and it is scarcely conceivable that far-seeing men or corporations could for a moment justify themselves in any lessening of their activities. Rather is the situation one that demands an aggressive work which would show that the people and the corporations of this section are ready to meet every emergency—to meet it boldly and broadly. New England is setting a splendid example. Will the South follow it?

THE AMERICAN ENGINEER.

IN his address last week dedicatory of the engineering building of the Johns Hopkins University at Homewood Gen. George W. Goethals of Panama Canal fame emphasized his commendation of the State of Maryland and the authorities of the Johns Hopkins University for their handling of the problems involved in the idea of the engineering school by touching upon the importance of the profession of engineering. He said:

While not admitting the claim that has been made that engineering is the noblest of all the professions, I do believe that it is the most satisfactory, from the fact that the greatest pleasure and happiness in life is derived from service and accomplishment.

Should the engineer branch out from the purely technical part of research, investigation or design, and handle actual construction, even of moderate size, he finds his field of operations still further extended; he is then brought directly in contact with and control of the uncertain and unreliable—the human element—and he finds the problems to be solved greatly multiplied. He must become something of a diplomat in dealing not only with his labor and its organizations, but, if his work is in another country, then with the population and government of that country.

He acquires business experience, for it is his duty as an engineer to do his work at a minimum of cost; again, as money is always needed, he must not only convince corporations or financiers of the necessity for funds, but must show beyond reasonable doubt that proper returns will result from the investment. If the work is for the city, State or National Government, and the moneys are provided by City Councils or Boards of Aldermen, by State Legislatures or the National Congress, he must be somewhat of a politician. With the work removed from sources of supply, he becomes a business manager on a more or less extensive scale, including at times the butcher, the baker and the candlestick maker.

Because the application of engineering science to the work of the world is so intensely practical and is so dependent upon materialities, or, more likely, because of the innate modesty of true greatness, is the reason, perhaps, why General Goethals neglected to dwell upon the characteristic of the engineer who writes his name in enduring letters in the record of world history, the ability to see a great vision of his own and to make it a fact or to realize to the full the great vision of another. The Simplon tunnel, piercing the Alps for 13 miles and reducing importance of the feat in road building conceived a century earlier; the tunnel through the Andes, two miles long and two miles above the level of the sea, in the railroad link between the capitals of Chile and Argentina; the tubes beneath the Hudson River; the subways of Boston, Philadelphia and New York; the Cape-to-Cairo Railway through the Dark Continent; the Suez and the Panama canals, bringing oceans and seas together; the Chicago drainage canal, reversing the natural flow of streams; the capture of the power in mighty rivers

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Vast Construction Work in North Carolina

[Special Correspondence Manufacturers Record.]

Raleigh, N. C., May 21.

This is a day of big enterprises in North Carolina. In the eastern part of the State three of the largest enterprises in the South are now being pressed. In the extreme northeast the widening and deepening of the Albemarle and Chesapeake Canal is well toward completion. This canal was bought from private owners by the Government for \$500,000. It is being made 90 feet wide and with 14 feet of water. The one lock has been abandoned and the waterway is clear all the way, with passing basins for vessels. At its north end it gives upon salt water from the Elizabeth River and at the south end upon the fresh water of Albemarle Sound. In former days it was a rival of the Dismal Swamp Canal, one of the oldest in the United States, which has two locks and which is fed by Lake Drummond, near its center.

The Government is not only making the Albemarle and Chesapeake Canal a vital link in the great Inland Waterway, but it is deepening the approaches to it. Three dredges are at work in the canal and approaches, and in the sounds further southward there are two others looking after channels. The latter extend through Croatan Sound and Pamlico Sound. The canal from the Neuse River to Beaufort harbor has been completed almost three years, and there is a steady flow of traffic through it, which shows a great increase year after year. The Albemarle and Chesapeake Canal is in daily use by vessels drawing from 10 to 12 feet of water.

The journey from Norfolk, or one might say from Boston, southward through the canals, sounds and bays is attractive to the tourist and invaluable in point of safety to any vessel whether for pleasure or trade. Certainly the many miles of it in North Carolina afford an infinite variety. It passes directly through Albemarle Sound and traverses Pamlico Sound, which is so wide, 40 miles, that from an ordinary vessel in its center no land is in sight.

The waters of the North Carolina sounds are rich in fish, and the shad taken there are well known in the great markets. There are many oysters, though the grounds on which these are found were much depleted by thoughtless people who sold any and all sizes to the prudent Marylanders and Virginians, who bought hundreds of shiploads of the little ones and planted them in their own waters, to their great profit. Now this State law has stopped such exportation, and all oysters are inspected at the State line.

Many fish nets are to be seen in the North Carolina sounds for catching shad, while on the beaches of the upper sounds, where the great fresh-water streams pour in, there are long seines, and there the large catches of both shad and herring are made. The season recently ended was one of the poorest on record, owing to storms which destroyed nets of the value of \$200,000 in Pamlico, Croatan and Albemarle sounds.

The Inland Waterway has its present terminus at Beaufort, and there the initial work has been begun on the most important harbor of safety in the country. For 300 years ships have sought the natural refuge afforded by the sickle-shaped land near the extremity of Cape Lookout, a dozen miles southeast of Beaufort, the opening to this refuge being from the westward. The capacity of this harbor of safety will be trebled by a construction of an artificial character which will be made in from two to three years' time and which will cost \$3,500,000 at least.

The vastness of this construction work may be gained from the statement that the Norfolk Southern Railway will extend its line to the Cape, crossing Core Sound a little north of Beaufort harbor and running down the sandy beach, part of which is somewhat bold and most of which is treeless. The trestle across Core Sound will be nearly two miles in length—of course, trifling in comparison with the one across Albemarle Sound near Edenton, which is almost six miles long. It will, however, find much deeper water in its southern part than the one across Albemarle Sound, namely, in the ship channel next to the Core "banks."

The word "banks" in North Carolina is applied to the

chain of barrier-reefs stretching all the way from upper Currituck Sound to a point at the extreme end of Bogue Sound, some 25 miles south of Beaufort. There are something like a dozen openings or inlets connecting the sea and the sounds. Some of these inlets are more shallow than they used to be, and some have become closed, Currituck Inlet, for instance, through which the first English vessels probably got to Roanoke Island in August, 1584. Beaufort Inlet is deep naturally and important. At the harbor of safety there is deep water already, and the vast breakwater of granite will give that still deeper.

In the section traversed by the Norfolk Southern Railway in eastern Wake county and in Nash there are remarkable outcrops of granite, covering sometimes a score of acres and even more, and from such an outcrop in Nash the stone for the breakwater will be taken at a station named Neverson. At this point great preparations are being made for the shipment of the granite, which is of good quality and hard. Facilities for many cars are being prepared. The stone is ready to the hand, and will be loaded by machinery like that in use at the granite quarries at Mt. Airy. It will be unloaded at Cape Lookout from the same cars and also by machinery. At other works at both ends of the route all the appliances as well as the work will be the last word as to methods.

The third of the great developments in the eastern part of North Carolina is the drainage of Lake Mattamuskeet, which is in Hyde county, and is the largest lake in the State. That county ranges from 15 inches to a few feet above the level of the water in Pamlico Sound. It must be borne in mind that the only tides in these sounds are what are known as wind tides, the inlets being so narrow and shallow that the sea has practically no effect. Lake Mattamuskeet is 21 miles long, its greatest width 7 miles, and nowhere is it more than 3½ feet deep, so that a man can with safety wade anywhere in it. The Indian tradition was that this lake was formed by the burning of the peaty soil of that region, and its name was given on this account. The lake has in man's memory receded somewhat, and old beaches show that it was in former centuries much larger than at present.

The area of the lake is about 50,000 acres. Its shores are fringed with little trees and shrubs, and further back there are woods. A road follows in general the border of the lake. The farms around the latter have for years been drained into it. These farms and the lake have now been joined in one great reclamation movement and made one of the largest drainage districts in the South, some 150,000 acres.

Many years ago a canal was built, about 12 miles in length, from the lake rim on the east side of Pamlico Sound, this serving the double purpose of taking off the lake flow and also giving a waterway. The private company which last year bought the lake bed from the North Carolina Board of Education, and which is expending \$600,000 on the drainage, has cut another canal, 12 miles long, 80 feet wide and 12 feet deep, also to the lake rim, and into this canal the water from the lake will be lifted by a battery of great pumps.

The drainage district reaches two miles from the borders of the lake. The soil is indescribably rich, being black peat of great depth. The bottom of the lake is in part a white sand, very fine, and a chocolate-colored substance locally known as "coffee grounds." Five dredges are at work, two on canals east and west of the lake and three within the lake. The latter are cutting cross canals in the lake bed. Into these the water will flow to the pumping station, and there the great pumps will lift it into the ship canal and drainage canal combined, which leads to Pamlico Sound.

At the pumping station the concrete bases for the massive pumps are under construction. The machinery will arrive in the late summer, and by the end of the year the lifting out of the water will begin. It will not take long to empty the lake. Then there will be two great ditches in it, running its entire length, and three intersecting ditches, while all around these there will be farms. The recession of the water in the lake is already

A LUMBER HINT.

SOME months ago representatives of the Douglas fir lumber interests of the Pacific coast were studying the possibilities of entering the Eastern markets by way of the Panama Canal. Now comes a report of United States Vice-Consul R. N. Newcomb at Victoria, British Columbia, to the effect that Vancouver Island exported to the State of Washington in March last 2,280,000 feet of logs, principally cedar, to be made into shingles, and that the lumbermen of British Columbia operating on Vancouver Island are trying to enter the Eastern market of the United States for Douglas fir. One firm has planned to ship annually to New York between 100,000,000 and 200,000,000 feet of Douglas fir if proper transportation rates can be secured. These plans will probably be the subject of study by lumber interests of the United States, especially those which have been hampered in the past few months by inability to reach the usual foreign markets. The situation, both present and future, suggests an opportunity for intelligent review of the lumber tariff schedules.

"Doing a Big Work."

Mr. W. H. Lumsden, manager American Bank Co., Memphis, Tenn., writing to the MANUFACTURERS RECORD with reference to the expressions from Southern bankers and others on business conditions published in our issue of May 13, says:

"We have been very strongly impressed from time to time with the very able and intelligent manner in which you have portrayed commercial and manufacturing conditions and possibilities in the South, and feel that you are doing a big work for this section."

Interstate Cottonseed Crushers.

At the annual session of the convention last week at Birmingham, Ala., of the Interstate Cottonseed Crushers' Association J. J. Culbertson of Paris, Tex., was elected president; George W. Covington of Hazlehurst, Miss., first vice-president, and Jo W. Allison chairman of the publicity committee. Robert Gibson of Dallas, Tex., is life secretary of the association.

notable, and there are farms this season quite a distance out in what used to be the lake bed.

The farmers who have been draining their sulphur water into the lake from points outside the drainage district will have other arrangements for carrying it off, though the deep canals and ditches, which are really small canals, will tend to lower the general water level considerably in the lake region. The bottom of the lake is a couple of feet below the level of the water in the sound; hence the necessity of pumping and of the prevention of the backing of water from the sound into it. This singular lake, one of the most remarkable in the whole country, has evidently in past centuries been twice as deep as it now is and far larger, for west of it the largest Indian canoe ever seen in North Carolina was unearthed many years ago, its length being nearly 70 feet. It was made from a cypress log by means of fire and stone implements.

It must not be thought that the big enterprises which are being conducted in the wonderful eastern country of North Carolina are all which are in progress, for the State itself is particularly active at five points, using its convicts as constructors. The amount of private railway construction having slackened, the State is promptly placing convicts thus made available on two important mountain railways, and Governor Craig expects to see both of these completed and in full operation beyond the Blue Ridge before his term of office ends. One of these roads is the Elkin & Alleghany, State-aided, which is now pushing up the southeast face of the Blue Ridge, and will cross the latter at the 3300-foot level quite near the point known as Roaring Gap, this being the nearest point of the Blue Ridge to the eastern part of North Carolina, admitting this road into Alleghany county, a wonderland for fruit and field crops, woods and timbers and healthfulness. The number of convicts on this work is now 250. There are two steam shovels and much other machinery, and as rapidly as the grading is done the track is put down, so that the next station to be opened will be at the crest of the Blue Ridge, which is now in plain sight from railroad. This road will go to Sparta, the county-seat of Alleghany, and then slightly northwestward across that county.

The other railway which the State is building with its convicts is the Watauga River & Yadkin Valley, which is heading for Boone, and which will cross the Blue Ridge about eight miles east of Blowing Rock on the 4000-foot level, Boone being the highest county seat in the country east of Denver, Colorado. The number of convicts on this work has been increased to 175. In this case also the laying of the rails keeps up with the grading, and the mountain crest is almost in sight from the present railroad. For most of its length the road runs alongside the Yadkin River and touches the edge of the fertile region on the upper Yadkin long known as the "Happy Valley."

Not content with this railway development, the State has a large number of convicts constructing three highways, each of which will have an important effect not only upon tourist travel, but also upon general traffic. This is the first time the State has gone directly into road construction of this particular type with its convicts since it built the turnpike between Wilkesboro and Jefferson. There is, in fact, a difference, for the latter road was built under the direction of a private corporation, and the State took its stock in payment for the labor, while now the work is being done by the State.

The three highways thus under State construction are the one through the Hickorynut Gap, not far from the southern border of North Carolina and between Asheville and Rutherfordton. It is one of the most remarkable regions in the eastern part of the country, the canyon or gap being from 1200 to 2000 feet in depth, with sheer walls of stone and a waterfall 960 feet in height. Nearly a hundred years ago a turnpike traversed this gap, but it was a poor thoroughfare compared to the splendid road now under construction and to be finished in the late summer.

The two other roads under construction and referred to are both on the Central Highway, which extends from the Tennessee line and the Smoky Mountains to Beaufort on the coast, a distance of 575 miles. One force of convicts is building the link in Madison county, near Marshall, and making an admirable thoroughfare of it. The other force is working on the most difficult section in all the length of the Central Highway, namely, that down the eastern face of the Blue Ridge, this side of Asheville, from the Swannanoa Gap to Old

Fort at the mountain foot, a distance of some nine miles. For 35 years there has been no road at all between these points, as the railway took most of the old highway for its line. Dr. Joseph Hyde Pratt and his engineers, representing the State department of good roads, have found a remarkably easy grade for this notable link in the Central Highway. The county of McDowell has given \$20,000 toward the construction, the United States \$10,000 and private individuals about \$5000. In this short distance the highway will cross the Catawba River seven times on bridges of concrete and steel.

Thus it will be seen that the State is by no means idle on its part in the way of development, while the General Government is expending millions and the private corporation which is doing the great drainage work is expending almost two-thirds of a million.

There is another eastern development which is attracting much attention. Seven counties in that section have been specially studied during the past two years by the State agricultural department and by private investors. These are known as the "black land" counties, and the State has established in the center of this area a special experiment farm, recognizing this area as being distinct, its center being Belhaven. The soil is as black as any prairie and many feet in depth, and the forests are marked by the largest trees in the State. The forest is felled and the trees left on the ground except in so far as they are used for lumber, being largely cypress and gum. Later they are set on fire and partially burned. Then corn is dropped in holes stuck in the ground, and this comes up like a young forest. Meanwhile the territory has been ditched by dredges, the larger canals being used as waterways. This spring, at Terrance, in Beaufort county, fire was set to 2000 acres of the felled timber which was dry, and the result was wonderful. The roar of the fire could be heard several miles and the smoke spread as far as Washington, while the inrush of air due to the fierce heat swept up the tops of great trees as if they were straws. Into this black land region settlers are coming rapidly from the North and West, and some record crops are being made.

In the southeasterly section of the State, in the Wilmington area, the development of land is largely for colonies, and the Italians who came in two years ago are being followed by Belgians who have arrived since January, and who find conditions not very different from those in their own country in normal times.

The United States is doing important development work in the Cape Fear River between Wilmington and Fayetteville, the latter place being the head of navigation. A hundred years ago Fayetteville, holding that important position, was easily one of the foremost places in North Carolina, and had a great trade with all the central part of the State, with big warehouses and sometimes a thousand trading wagons in a week or less time. The Government is making sure a depth of 10 feet of water to Fayetteville at all seasons and the construction work down the river, in which concrete is largely used, will bring this about. The steamers which from the earliest days of steam power have used this river, navigable further into the interior than any other in the State, have never ceased to ply the Cape Fear, but they will now be more important than at any time in the past 40 years.

The time was when Wilmington, New Bern, Beaufort, Washington, Edenton and one or two other places had a big shipping trade, notably with the West Indies, in sailing vessels, and at Washington as many as 55 could be seen at the wharves at a time. It is said in that country that the steamers put the sailing vessels out of business, and now the railways have done the same thing to the steamers. North Carolina has a greater length of waterways than any other State in the Union, and while a hundred years ago it made remarkably full use of them, now many are idle except so far as small boats, gasoline driven, are concerned, yet the possibilities are beyond description.

It is no wonder that Governor Locke Craig is pleased to see the progress that is being made and to know that his State is going ahead in so many lines of endeavor. He looks for great results from what is being done and from the large amount of good road work in progress, an amount far greater and more effective than ever before. Some counties which have been notably backward as to roads, like Davidson, have taken on new life. That county, which has not one good road, this week began the construction of a system which is to cost about \$300,000, and which will embrace about 300 miles.

FRED A. OLDS.

Tennessee Manufacturers.

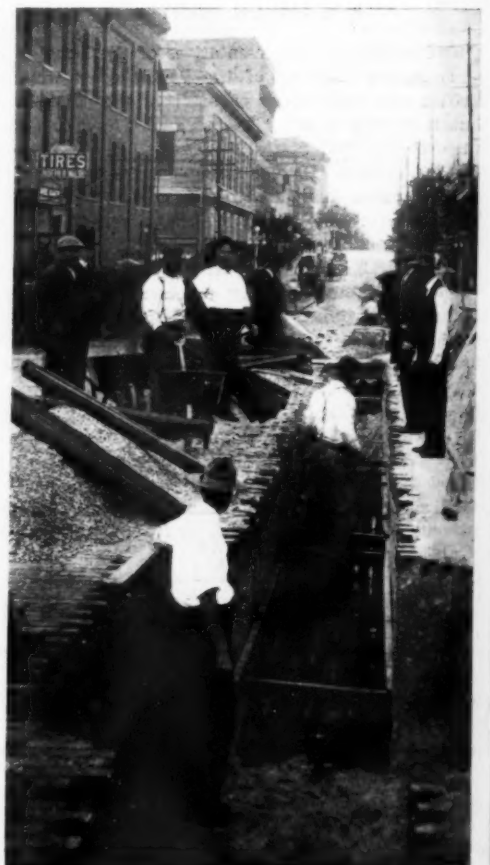
At the third annual meeting this week at Chattanooga of the Tennessee Manufacturers' Association reports will be made by President T. F. Bonner of the Bonner Furniture Manufacturing Co. of Nashville; by Secretary C. C. Gilger of Memphis; by Treasurer W. H. Clarke of Phillips and Buttorff Manufacturing Co., Nashville; by M. T. Temple of the Chattanooga Furniture Co., on education; by George L. Hardwick of the Cleveland Woolen Mills, Cleveland, on textiles; by J. W. Rawlings, on foreign trade; by T. R. Preston, on taxation; by W. H. Clarke, on legislation, and by S. B. Anderson of Memphis, on the meeting of the Chamber of Commerce of the United States. In an open discussion as to means for broadening the scope of usefulness of the association will participate J. E. Edgerton of Lebanon, J. E. Annis of Chattanooga, J. M. Rule of Knoxville, F. C. Guthrie of Nashville, R. F. Callaway of Chattanooga, C. T. Jarrell of Humboldt, W. C. Johnson of Memphis, C. D. Mitchell of Chattanooga, E. W. Foster of Nashville, B. H. Wilkins of Tullahoma, J. B. Young of Bemis. At the banquet addresses will be made by C. C. Hanson of Memphis, T. C. Betterton of Chattanooga, T. F. Bonner of Nashville and L. D. Tyson of Knoxville.

Improving Agriculture.

Secretary George R. Brown of the Little Rock Board of Trade writes to the MANUFACTURERS RECORD:

"We are conducting a very successful campaign in this State for improved agriculture and profitable farming. While we have reduced the cotton acreage only 25 per cent., we have greatly increased the other crops, and especially livestock, hundreds of our farmers having purchased high-class stock for breeding purposes."

JACKSONVILLE'S TELEPHONE CONDUITS



Jacksonville, Fla., is to be one of the model cities of the country in respect to municipal improvements, and especially as to highways. Involved in the latter is the placing of wires underground. Included in this underground service is that of the Home Telephone Co., which in establishing its automatic telephone system installed approximately 400,000 linear feet of conduit made by the Fiber Conduit Co. of Orangeburg, N. Y. The trench shown in the accompanying illustration is the main one and the largest of the system leading from the exchange to the center of the city.

Industrial and Commercial Advancement at Port Arthur



A SHIPPING SCENE ON THE WATER FRONT AT PORT ARTHUR, TEX.

[Special Correspondence Manufacturers Record.]

Port Arthur, Tex., May 15.

The wonderful development of Southeast Texas is not fully realized until one visits Port Arthur. This little city of 15,000 people is situated on the west bank of Lake Sabine and at the head of the Port Arthur Ship Canal, a channel 27 feet deep and 270 feet wide, affording an outlet to the Gulf of Mexico through Sabine Pass, the distance from the docks to the open sea being 16.8 miles. Port Arthur was founded in 1897 and incorporated in 1898, but very little effort for development was made until 1908, since which time the city has advanced rapidly, today being among the most modern and up-to-date cities in the South.

Adjoining the city limits are the oil refineries of the Gulf Company and the Texas Company. These industries put Port Arthur on the upgrade and each year bring greater development. The Gulf Company is now spending several millions in the construction of a paraffine plant, building additional storage and enlarging the refinery proper. The Texas Company has purchased several hundred acres adjoining its plant, and has begun new construction that will represent an expenditure of close to \$4,000,000. These two plants produce a payroll of better than \$2,000,000 annually, and are steadily increasing their working forces. Each company owns and operates a fleet of vessels which trade with practically every country on the globe.

The docks and warehouses on the water-front are modern in every respect, thus affording the best facilities for handling all classes of cargo. Two railroads, the Kansas City Southern and the Southern Pacific, now reach the city and are enjoying enormous revenue from tonnage handled.

The Stone & Webster interest operates an interurban line from Port Arthur to Beaumont, a distance of 20 miles. Cars run every hour, on the hour, making the trip in 48 minutes. This project was opened for business little more than a year ago, and has been a revenue-producer from the first day of operation. The Port Arthur Traction Co. (street railway) operates 10 miles of track and reaches the refineries, the docks, the pleasure pier and principal parts of the city.

Three years ago the city purchased the water and sewer systems, and has improved and extended these utilities to such an extent that Port Arthur is today provided an abundant supply of pure artesian water, and has a sewer and drainage system equal to any city of its size in the entire country.

The fire protection has recently been improved and extended, thus bringing about a reduction of 25 per cent. in the insurance rate.

The electric-lighting system is one of the most perfect in the South, and Port Arthur enjoys the reputation of being better lighted than most cities of its size.

A gas plant of sufficient capacity to care for the needs of a much larger city is in operation and is affording most excellent service.

Two ice plants are in operation, both enjoying a splen-

did business. Telephone service is supplied by two companies, and is considered unusually good.

One of the most attractive features of Port Arthur is the Pleasure Pier. This playground is located in Sabine Lake, 2500 feet from the shore, and is reached by the Traction Company and a magnificent shell road. Amusements of various kinds are provided, and the Pier has become the popular summer resort for the people of East Texas and West Louisiana.

Hotel accommodations are far superior to most towns of this size. The Plaza, a magnificent hotel, located on the lake, facing the Pleasure Pier, is one of the finest in the South.

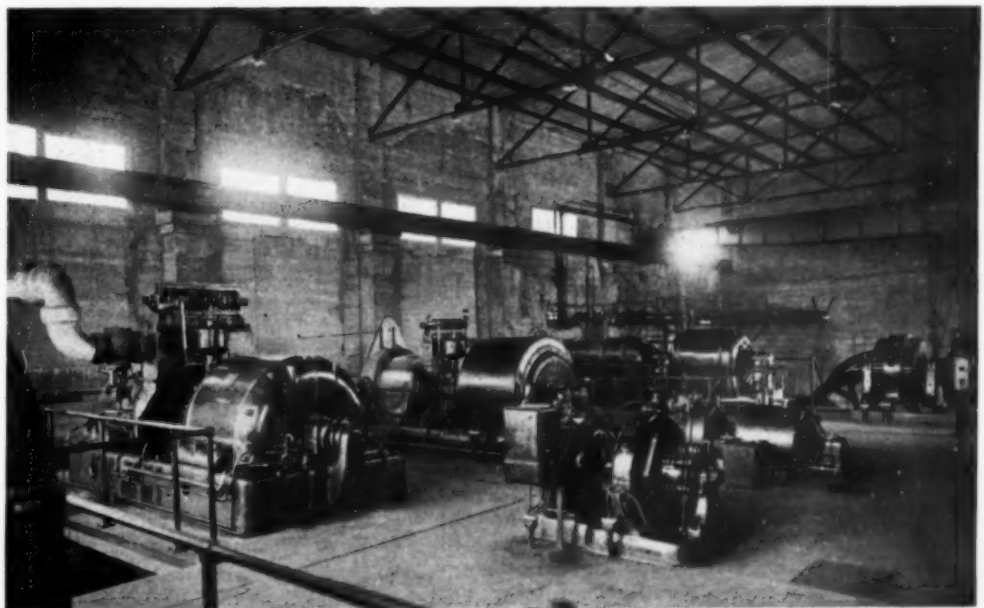
Port Arthur has five strictly modern brick and stone public school buildings, each occupying one block of ground. The high school, located in the park on the banks of the lake, is one of the most imposing school buildings in Texas. This school district takes in the property of both refineries, therefore is one of the wealthiest in the State. The Port Arthur College, endowed, is an institution of which all of Texas may well be proud.

The Mary Gates Hospital, built by John W. Gates, in memory of his mother, is a beautiful building, with large comfortable private and ward rooms. This institution is equipped with every modern appliance for the care of the sick and injured. There are many other splendid buildings in the city all indicating the pride and confidence of the people.

The custom-house building cost \$140,000. Two banks care for the finances. These institutions, as indicated by their latest statements, are in a flourishing condition. The business houses have an up-to-date appearance, and the merchants are enjoying splendid trade.

In approaching Port Arthur by rail one passes considerable lowland, thus forming the conclusion that the city is surrounded by marsh. Such is not the case, as soon will be discovered by use of an automobile. The greater portion of the land is well drained and in cultivation. Rice is the principal crop, but corn, cotton, oranges, figs, strawberries, blackberries and all kinds of vegetables are grown with much success. Berries, especially strawberries and blackberries, do unusually well in this climate, and many growers are operating with splendid revenue return. A trip to Griffing Bros.' experimental farm, located four miles northwest of the city, will soon convince one of the wonderful possibilities of this section from an agricultural standpoint. This industry is one of the show-places of the west, and represents an investment of \$500,000. Here are favorable climatic conditions, the temperature of summer averaging 80 degrees, while that of winter rarely ever goes below 25 degrees above. Summer days are warm, but the delightful breezes from the lake and Gulf keep down excessive heat and bring the nights to an enjoyable temperature.

A recent act of Congress, taking over the maintenance of the Sabine-Neches Canal, which runs through the city limits of Port Arthur, gives this city added water frontage of 12 miles. This canal has a depth of 20 feet on a low tide, has a width of 180 feet and empties into the main ship canal two miles below the city. Therefore, it will be seen that oceangoing vessels may pass in and out of this canal and the property abutting it will be valuable for the development of railway terminals, wharves, warehouses, etc. The route of the Intercoastal Canal passes through the Sabine-Neches



INTERIOR OF ELECTRIC POWER STATION OF THE PORT ARTHUR LIGHT & POWER CO.

Canal, thus bringing this valuable inland waterway to the very doors of Port Arthur. When one takes time to carefully investigate these conditions and takes into consideration the enormous tonnage originating at this point it seems indeed strange that other transportation lines do not take advantage of the opportunity. Some one, or some set of men, will one day awake to the possibilities, and then we may expect to see development that will attract the attention of the entire nation.

In the customs district of Sabine, of which Port Arthur is headquarters, the water-borne tonnage in 1914 was 2,423,641 foreign and 3,813,548 coastwise, a total of 6,237,189 tons, valued at \$95,087,134, compared with 1,983,179 foreign and 2,775,229 coastwise, a total of 4,758,408 tons, valued at \$86,437,688, in 1913.

IN BOYNTON OIL FIELDS.

The Community Interested, Too, in Other Productive Activities.

Boynton Commercial Club,

Boynton, Okla., May 20.

Editor Manufacturers Record:

Who will help consume 100,000,000 cubic feet of natural gas produced daily from the Boynton oil fields? That is the question interesting the merchants and citizens of this 12-year-old town on the Frisco Railroad, midway between Muskogee and Okmulgee, in Eastern Oklahoma.

A new oil refinery is in sight, and almost an absolute certainty, that will start with a 1000-barrel daily output, which, with increasing amount of production and sales of refined goods, will in a short time reach the 3000 mark.

Boynton has the high-class material out of which some 1000 carloads of brick is shipped annually from the local plant built in 1912, costing \$250,000 and employing a payroll circulating \$5000 monthly. Experts from New York, Chicago, Pittsburgh and St. Louis pronounce the shale deposits in abundance around Boynton among the best to be found in the United States for paving blocks, tiling and building material.

Boynton now has a population of 1200, supporting two banks with deposits of \$150,000. The sidewalks all over the town are cemented 10 feet wide, with gutters. There are a \$35,000 municipally-owned water-works, five churches, a school equal in equipment and advantage to those of a city of 5000.

Boynton ships annually 500 cars of hay, mostly into Arkansas; 175 cars of oats, 675 cars of cottonseed and 1000 bales of cotton. Two elevators with combined capacity of 60,000 bushels, one having recently been completed at a cost of \$10,000, are objects of commercial pride. The entire outbound tonnage in carloads approximates 105 cars monthly and 47 tons in less than carloads.

Incidentally, Boynton enjoys the short-haul advantages, which means no interchange; the differential on two-line haul on car pipe is five cents per hundredweight, groceries and local merchandise nine cents per hundredweight.

The agricultural surrounding life is progressive and diversified; large acreages of kaffir, milo, feterita, alfalfa, corn, peanuts, wheat, oats, produce and fruit are in evidence. The cotton acreage this year is reduced 40 per cent., and more careful attention is being given seed selection and better cultural methods.

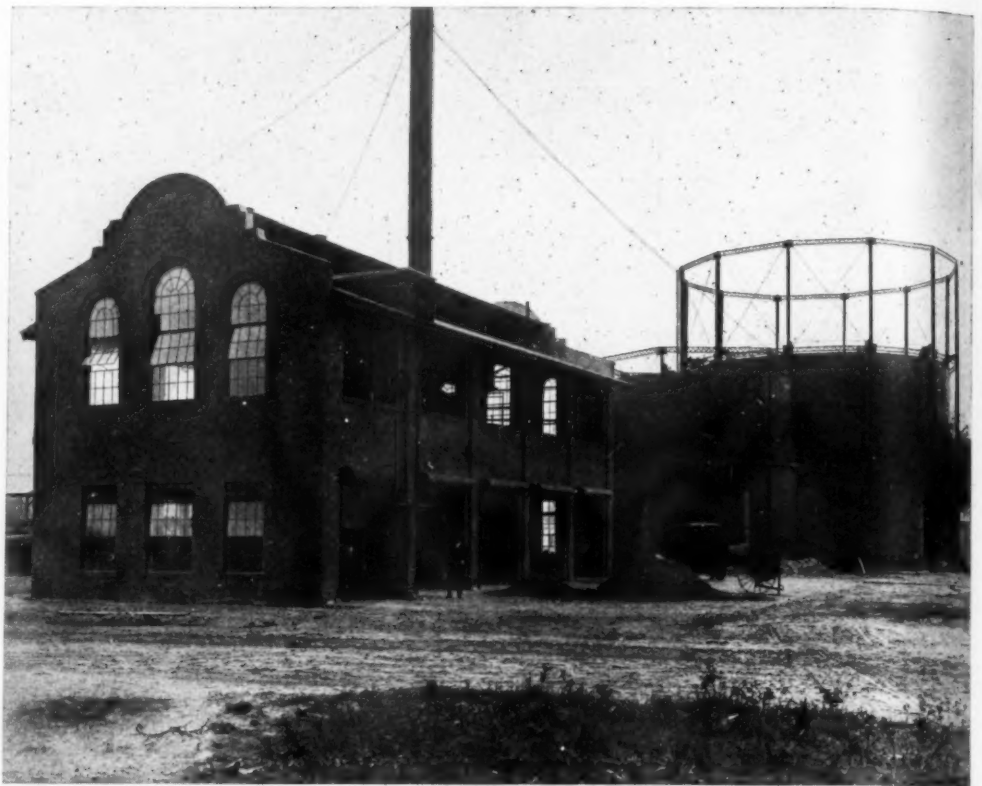
Two hundred and forty school boys and girls have entered the peanut, corn, forage and home garden clubs, mixing brains with seed and soil, to the end of producing the largest yield on an acre at the lowest cost of production, thus learning how to farm for profit.

To encourage more home-grown meat, the local bank agrees to finance the purchase of pigs, taking the note of worthy boys and girls, this sum to be paid back when the stock has been raised, fattened and sold under instructions furnished free by the State agricultural department.

Every day is clean-up day in Boynton, the Ladies' Civic Club working in connection with the Boy Scouts, who mow lawns, eradicate weeds and destroy breeding places of flies and mosquitoes. Nature and a town full of live civic dynamos are responsible for this new Boynton, and the best way to watch it grow is to be on the spot doing something, for here is unlimited opportunity.

ISAIAH KIRBY, Secretary.

THE GAS WORKS AT ST. PETERSBURG, FLA.



Since last November the gas plant for the municipality of St. Petersburg, Fla., designed by J. B. McCrory Company, engineer, of Atlanta, Ga., has been in operation. The accompanying illustration shows a general view of the plant, which has a generating capacity of 600,000 cubic feet of water gas every 24 hours. The generating apparatus and equipment were installed by the Gas Engineering Co. of Trenton, N. J., which is now engaged in the construction of a plant at Griffin, Ga.

OKLAHOMA OIL AND GAS.

Phases of Recent Development in Fields of the State.

Much activity is reported in the oil and gas region of Oklahoma. Mr. E. T. Crawford of Charleston, W. Va., in speaking of the oil industry in Oklahoma, where he has been for the last two years, stated that in the past year, and especially in the last one or two months, business conditions in that section have steadily improved, and the outlook is very encouraging. He thought, too, that the general public was beginning to realize that with the harvesting of the great and superb wheat crop, which, according to present prices, will bring a large amount of money into the State, and with a continued increase in the price of oil, good business for everybody and prosperity for many was assured.

Most of the oil with a high fuel percentage, such as that produced in the Cushing oil fields, which is said to be about 35 per cent. gasoline, sells at a premium of 10 cents a barrel, and all the oil available finds a ready market at 40 cents per barrel. This price will probably hold for some time, says Mr. Crawford, and with the trade situation of the whole country becoming stronger, it is likely to increase considerably.

Mr. Crawford is connected with the Merritt Oil & Gas Co., which owns 800 acres in the oil-producing section in and around Boynton, about 16 miles from Muskogee, Okla. This company, in June, 1914, sank the first oil-producing well in that section and started the development of these fields. The company now is operating seven wells, of which five are producing oil, and two gas. About 15,000 barrels of oil a day are obtained at present from the five wells. Sixty per cent. of this output is sold at once and the balance run into large storage tanks erected on the company's property. Oil from the Boynton fields is said to be very high in lubricating properties, and brings 40 cents a barrel. Mr. Crawford states that practically all the oil now marketed by his company is sold to the Prairie Oil & Gas Co. It is piped by the Prairie Pipe Line Co. to Baton Rouge, La., where it is refined by the Prairie Oil & Gas Co.

Two other oil fields opened in the Boynton section recently are the Cole pool and the Harris pool. About 10 miles of pipe line connecting with pipe lines to Mus-

kogee and the east and south are now being constructed to these fields. A large pipe-line contract is also being executed in the Cushing oil region. This includes a double pipe line to the east and south, which will be finished some time in August, making four pipe lines from this territory.

Cottonseed Flour for Belgium.

From the Schulenburg Oil Mill, G. A. Baumgarten, proprietor, Schulenburg, Tex., was shipped on May 18 a carload of cottonseed flour for Belgium. In a letter to the MANUFACTURERS RECORD Mr. Baumgarten says:

"This flour was donated by the Texas Cottonseed Crushers' Association, the bags were donated by the Texas Bag & Fiber Co., Houston, Tex. This car contained 5800 sacks of cottonseed flour of 10 pounds each, making 58,000 pounds of flour. The bags were printed in both French and Flemish, with full instructions how to use this flour with wheat flour, rye meal, cornmeal and potato flour. To protect this flour in this long trip each 10 of the 10-pound bags were placed into one large gunny bag, which was also printed in French and Flemish. The reason the Texas Cottonseed Crushers' Association had this flour put into small 10-pound bags was to reach as many families as possible."

Baltimore Industrial Corporation.

John R. Bland of the United States Fidelity & Guaranty Co. has been elected temporary president of the Industrial Corporation of Baltimore, planned to encourage the growth of new industries in this city. Eugene Levering, president of the National Bank of Commerce, has been elected treasurer; Douglas H. Gordon, Eugene Levering, Mayor James H. Preston, Jacob Epstein, John T. Stone and George M. Shriver, vice-presidents. Messrs. Bland, Levering, Stone and Epstein, together with Waldo Newcomer, Howard Bruce, Frank N. Hoen, Rufus N. Gibbs, Walter B. Brooks, Frank A. Furst, Charles N. Cohn and Frederick W. Nord, constitute the executive committee.

FEATURES OF THREE BRIDGES FOR ROME, GA.



BROAD STREET BRIDGE.



FIFTH AVENUE BRIDGE.



SECOND AVENUE BRIDGE.

Rome, Ga., has outgrown its old steel bridges over the Etowah and Oostennaula rivers, and plans and specifications for three new bridges have been prepared in the office of Greiner & Whitman of Baltimore, Md., who have associated with them in carrying out this work Mr. W. C. Spiker of Atlanta, Ga. The two bridges at Broad street and Second avenue will be replaced with handsome reinforced concrete arch bridges, and the old steel swinging drawbridge over the Oostennaula River with a new steel lift bridge.

The old bridges over the Etowah River are Whipple trusses, the Broad street bridge being 300 feet long and the Second avenue bridge being 200 feet in length. They have both been strengthened by having secondary trusses framed into the old Whipple trusses. These old bridges, however, are about 25 years old, and are not only very light to carry the heavy loads which come upon them today, but are so narrow that they become congested with the amount of traffic during busy periods. The old Fifth avenue bridge over the Oostennaula consists of a 100-foot through Pratt truss and a swing span of approximately 200 feet in length. The widths of the old roadways are all 20 feet.

The new bridges will have roadways 40 feet wide between curbs, with eight-foot sidewalks on each side of the bridges. The Broad street bridge will have three main arches with 80-foot clear spans, and the approaches will be built with two short semi-circular arches at each end. The main arches will be built with three ribs of the segmental design. The Second avenue bridge will be of the same general design as the Broad street bridge, the main arches being elliptical, with 87-foot clear span, while there will be but one semi-circular approach arch at each end of the bridge.

The Oostennaula River, where it is crossed by the Fifth avenue bridge, is a navigable stream, although the boat traffic for most of the year is very light. The new bridge to replace the old swing bridge will be a lift bridge capable of being raised 65 feet. The lift span will be 112 feet in length, and the bridge will be symmetrical on either side of the lift span, there being a through Pratt truss 107 feet long and a short approach span 26 feet 6 inches long on either side of the lift span.

Not only were these bridges designed with a view to providing structures of sufficient strength to carry the heaviest loads which will come upon them today, but to take care of a reasonable increase in the weight of the loads which will come upon them for a generation in the future. They have also been made of sufficient width to take care of the traffic for many years to come without congestion.

Special attention was given to the design of the architectural features, and, as shown by the accompanying pictures, the bridges are all of pleasing design, and will be a monument to the foresight of the Rome authorities who have had this work in charge. The added expense of the artistic features of the designs amounts to a very small percentage of the total cost of the bridges, and the money expended for this purpose will be a continual source of enjoyment to those who travel over the bridges. In most of the countries in Europe the artistic features of the designs of even the smallest and most obscure bridges are usually considered, while in this country the public may be said to be just awakening to the possibilities of providing structures of symmetry and beauty, with very little increase in the cost necessary to build many of the homely, unsightly structures seen throughout the country.

SOUTHERN ACTIVITIES REVIVING.

Additional Reports by Bankers About Conditions in Their Localities.

Continuing the reports of the past two weeks of improvement of conditions in many lines in the South made in letters from bankers are the facts and deductions set forth as follows:

IMPROVEMENT IN DELAND SECTION.

THE FIRST NATIONAL BANK, Deland, Fla.

We are pleased to say that we consider a vast improvement in this section is due to the establishment of a market, and increased sales of our products. There has been ready sale for all naval stores manufactures for several weeks, at a moderate fair price, and I understand the operators have disposed of their entire holdings, which consists of both rosin and spirits, and which they had been compelled to carry almost since the beginning of the war.

Being located as we are in the center, you might say, of the largest citrus-fruit belt in the State, and the growers having received less than one-half the usual price for their fruit, money will naturally be very close in this particular section, but otherwise, as far as conditions are concerned, we are very optimistic, and unless some unknown mishap occurs in connection with the war, we feel that we shall enjoy good business and prosperity throughout the year. D. B. TUTEN, Cashier.

ON THE UPGRADE AT SHREVEPORT.

AMERICAN NATIONAL BANK, Shreveport, La.

In this country agricultural operations are very satisfactory, the cotton acreage being reduced approximately 10 to 15 per cent., while the grain and forage acreage has been increased greatly and our people are beginning to make an honest and earnest effort to raise more feed-stuff and stock.

In our immediate vicinity we are having considerable activity in oil and gas, and these industries have brought a great deal of new capital into this section, where we have several prosperous oil fields with a great deal of development going on, notwithstanding the low price of oil. As a whole, Shreveport and its vicinity has suffered less from the recent depression than any part of the South, and matters are decidedly on the upgrade at present,

and everyone feeling in a most optimistic frame of mind, believing that the future holds the brightest prospects for us. J. C. FISHER, Vice-President.

BUSINESS MEN AND BANKERS CO-OPERATING.

AMERICAN STATE BANK, Athens, Ga.

We are pleased to state that there has been wonderful improvement in general conditions in this vicinity during the last few months. There have been a general revival of hopefulness and restoring of confidence due to the increase in the price of cotton, a large amount of which was held long enough to bring good prices, and the realization of the fact that business men and bankers were co-operating in carrying indebtedness which was not liquidated during the Fall months. The strict economy practiced by many has also been a contributing factor. The prospect is good for the future.

J. WARREN SMITH, Vice-President.

THE STRENGTH OF SOUTHERN PUBLIC BONDS.

BOWMAN, COST & CO., St. Louis, Mo.

No symposium of opinions reflecting Southern activities would be complete without some reference to the avidity with which attractive Southern road, school and general improvement bonds are being taken at the present time. As contrasted with previous years, bond sales show real competition between buyers, and behind all of this is, of course, a genuine public demand. The latter may well be traced to three causes, in our opinion:

First—Growing knowledge of the great resources and high sense of financial integrity of the South.

Second—The passage of laws safeguarding and protecting the interests of investors in public obligations.

Third—The ability to obtain bonds ranking equally, in point of safety and merit, with those of Eastern and Northern communities, yet yielding from one-half per cent. to 1½ per cent. greater income.

We predict a growing popularity and preference on the part of many discriminating investors for those Southern issues which are bottomed upon sound municipal finance. BOWMAN, COST & Co.

It is estimated that 25,000 West Virginians of all classes and conditions put in two days' work of road improvement in the State last week.

The Flow of the Tennessee River.

Bearing directly upon the plan for the improvement of navigation in the Tennessee River and coincident utilization, especially at Muscle Shoals, of the vast water-power of the stream, is the statement in a recent report of the United States Geological Survey that in the 19 years from October 1, 1894, to September 30, 1913, the average flow of the river at its mouth where it enters the Ohio River at Paducah, Ky., was 63,000 cubic feet a second, or 40,700,000,000 gallons of water a day.

Copper in 1914.

According to figures compiled by H. R. Merton & Co. of London, England, the copper production of the world in 1914 was 893,085 tons, or 91,775 tons less than in 1913. Both Germany and Austria increased their output by 5325 tons in the aggregate, but the production decreased in the United States by 40,180 tons, in Spain and Portugal by 17,320 tons, in Mexico by 17,100 tons and in Australasia by 9580 tons. The United States production of 507,025 tons in 1914 was nearly 57 per cent. of the total.

For a Large Marble Mill.

J. M. Dunn & Son, Knoxville, Tenn., have received contract to erect the \$75,000 building for the big marble mill the Tennessee Producers Marble Co. will establish. There will be a 245x80-foot and a 200x50-foot building, both of concrete and brick and steel construction. A complete modern equipment of machinery will be installed.

For a Big Grain Elevator.

The Dock Board of New Orleans has sold \$1,250,000 bonds, the proceeds to be invested for building a big municipal grain elevator and terminals. It contemplates fireproof concrete reinforced with steel construction, with capacity of 1,000,000 bushels of grain. Ford, Bacon & Davis, New York and New Orleans, are the engineers.

Good Roads and Streets

SOUTHERN HIGHWAY ACTIVITIES.

Details of Week's Progress in Improvements in City and Country.

Further details of road and street undertakings and bond issues mentioned below are given under the headings Construction Department and New Securities, published elsewhere in this issue.

The MANUFACTURERS RECORD invites from its readers information about road and street work projected or under way, photographs of good roads and discussions of matters pertaining to the betterment of the highways of the South.

Bonds Voted.

Bristol, Tenn.—City will issue \$10,000 bonds for street improvements.

Morristown, Tenn.—Hamblen county voted \$150,000 bonds to construct roads.

Natchitoches, La.—Natchitoches parish voted \$40,000 bonds to construct roads.

Port Lavaca, Tex.—City voted \$17,000 bonds to macadamize, gravel or shell streets.

Princeton, W. Va.—Mercer county voted \$350,000 bonds to construct roads.

Bonds to Be Voted.

Chester, S. C.—City will vote on \$100,000 bonds to improve streets and sidewalks.

Dobson, N. C.—Surry county, Long Hill township, votes June 5 on \$10,000 bonds to construct roads.

Dobson, N. C.—Surry county, Dobson township, votes June 8 on \$30,000 bonds to construct roads.

Hallettsville, Tex.—Lavaca county, Shiner Justice's Court Precinct, votes June 29 on \$150,000 bonds to improve roads.

Orange, Tex.—Orange county, Precinct No. 3, votes June 19 on \$25,000 bonds to gravel or shell portion of road.

Palmer, Tex.—City awarded contract for one mile of concrete sidewalks.

Titusville, Fla.—Brevard county votes June 15 on \$150,000 bonds to construct roads, etc.

Whitley City, Ky.—McCreary county votes July 10 on \$100,000 bonds to construct roads.

Wilson, N. C.—City votes July 6 on \$250,000 bonds to grade and pave streets, etc.

Contracts Awarded.

Alexandria, La.—City awarded \$100,000 contract for street paving.

Charleston, S. C.—City awarded contracts for 1915 paving, comprising 65,000 square yards.

Conway, Ark.—Street Improvement District No. 3 awarded contract for 9000 yards of street paving.

Floresville, Tex.—Wilson county awarded \$27,600 contract to construct roads.

Kansas City, Mo.—City awarded \$5169 contract to construct concrete pavements.

McClaysville, P. O. at Epworth, Ga.—Town awarded contract to construct two miles of concrete sidewalks.

New Castle, Ky.—Henry County Fiscal Court awarded \$15,000 contract to construct macadam road.

Contracts to Be Awarded.

Baltimore, Md.—City receives bids until June 2 for 24,400 square yards of sheet asphalt, 2050 square yards of vitrified block and 2060 square yards of granite block paving.

Bartow, Fla.—Polk county receives bids until May 28 to construct five quarter-mile sections of sand-asphalt road.

Lexington, N. C.—Davidson county will expend \$300,000 for road improvements, etc.

McAlester, Okla.—City receives bids until June 2 to construct grading, curbing and guttering in Street Improvement District No. 19; about 2500 cubic yards excavation, 7500 square yards paving, 4000 linear feet curb.

Oakville, Tex.—Live Oak county invites bids until June 16 to construct roads in Road District No. 4 to cost \$40,000.

Orlando, Fla.—Orange county will construct 2½ miles of sand-oil road.

Pineville, Ky.—Bell county receives bids until June 5 to improve 20 miles of road; estimated cost \$70,000.

Princess Anne, Md.—State receives bids until June 15 to construct 4.40 miles of State highway.

Selma, Ala.—Dallas county receives bids until June 21 to improve about 13½ miles of road.

Towson, Md.—Baltimore county will improve 3¾ miles of road.

Winston-Salem, N. C.—Forsyth county will construct 4½ miles of road; grading and soiling.

The Dixie Highway.

As adopted at a meeting last week at Chattanooga, Tenn., by the commissioners of the proposed Dixie Highway, to extend from Chicago to Miami, the route will extend through Indianapolis, Chattanooga, Macon, Jacksonville and St. Augustine to Miami. Between Indianapolis and Chattanooga and between Chattanooga and Macon the route will divide, taking in Louisville, Ky., and Nashville, Tenn.; Rome, Ga.; Griffin, Ga.; Thomasville, Ga., and Tallahassee, Fla., on the west, and Cincinnati, O.; Lexington, Ky.; Knoxville, Tenn.; Dalton, Ga., on the east, with an east route between Macon and Jacksonville still to be selected. Permanent organization of the Dixie Highway Association was effected, with C. E. James of Chattanooga, president; M. M. Allison of Tennessee, H. L. Gordon of Ohio, Thomas Taggart of Indiana, W. T. Anderson of Georgia, G. W. Saxon of Florida, H. B. Hanger of Kentucky and Richard J. Finnigan of Illinois, vice-presidents; W. R. Long of Chattanooga, secretary-treasurer, and Carl G. Fisher of Indianapolis, Richard Hardy of Chattanooga and Clark Howell of Atlanta, with the president and secretary, members of the executive committee.

"Seeing Georgia."

Columbus, Ga., May 24.

Approximately 30 automobiles, with a total of about 130 passengers, left Atlanta last Saturday on the "Seeing Georgia" tour conducted by the Georgia State Chamber of Commerce. As this imposing spectacle swept through central-western Georgia at an average clip of 30 miles per hour, it created much attention. Everywhere interest in good roads was manifest, as the people at every town gathered as though it were a holiday and along the road for almost every mile of the route. The object of the tour is to boost good roads and give the Georgia people a chance to see Georgia. It will terminate at Atlanta on May 27. The officials of the tour are W. J. Dabney, J. Lee Barnes, Thomas R. Gentry, Chas. D. Hurt, A. M. Smith and C. J. Haden, all of Atlanta.

Contract for 50-Mile Highway.

Contract for building 50 miles of road, for which bids were invited lately, has been awarded by St. Mary parish, Louisiana, to Perry & Bonner of Franklin, La. This road will extend from Morgan City to the parish boundary near Jeanerette. About \$240,000 is available for expenditure.

Big Laclede Plant Completed.

The big coke and gas plant (previously described) of the Laclede Gas Light Co., St. Louis, has been completed and is expected to be in full operation by June 15. It is understood that about \$2,000,000 has been invested, and there are nine principal buildings on a 182-acre site near the Mississippi River front. Each day the plant will consume 1000 tons of coal in the manufacture of 750 tons of coke, 7000 gallons of coal tar, 2000 gallons of benzol, 5000 pounds of crude ammonia and 11,000,000 cubic feet of gas. About 5,000,000 feet of this gas will be consumed in heating the 56 coke ovens at the plant.

A Nashville (Tenn.) company has recently received contracts from the United States Government for large consignments of hickory handles for use in the Panama Canal zone and the Philippine Islands.

RAILROADS

[A complete record of all new railroad building in the South will be found in the Construction Department.]

CHESAPEAKE & OHIO EXTENSION.

To Build 30 Miles Into Buckeye State and Use Another Road to Columbus.

The Chesapeake & Ohio Railway Co. has announced that it will build its line into Ohio, beginning at a point near Portsmouth, where its proposed bridge will span the Ohio River, northward to Waverly, O., about 30 miles, connecting there with the Norfolk & Western Railway, which will be used under a trackage agreement from there to Columbus, about 62 miles. The original plan as published last year was for the Chesapeake & Ohio to build its own line all the way from South Portsmouth, Ky., to Columbus, about 92 miles. The cost of the 30-mile line now to be built, including the bridge, will be about \$4,500,000. The construction will be done by a subsidiary company, the Chesapeake & Ohio Northern Railway, organized for the purpose.

It is further stated in the announcement that the new line will be of great advantage to the coal mines along the Chesapeake & Ohio Railway, as it will insure a more expeditious movement of coal destined to the Northwest via the lakes and it will also insure a large tonnage with the Hocking Valley Railroad. The latter's coal pier at Toledo is of large capacity, and the Chesapeake & Ohio lines there will be placed in a commanding position. It is hoped that the new construction will all be finished by November 1, 1916. Recently bids were received for the work, and it is understood that contracts were practically closed pending the signing of the trackage agreement, which has just been done.

Carolina, Greenville & Northern.

Plans are under consideration for the possible extension of the proposed Carolina, Greenville & Northern Railway northeast to Bristol, and westward to Knoxville, Tenn. The main line planned by the promoters is from Kingsport via Greenville to Newport, Tenn., about 75 miles. To build from Kingsport to Bristol would demand 25 miles and from Newport to Knoxville 40 miles more of line. That would make the entire road 140 miles long. It is to be operated by electricity. Investigations have been made concerning the territory which the line will traverse, and a report says that the enterprise would prove profitable. Construction is expected to start soon. The company was organized some months ago with the following officers: H. S. Reed, 205 Grant Building, Los Angeles, Cal., president; James L. Callahan, 111 Broadway, New York, vice-president; Kirby Thomas, 43 Exchange Place, New York, general manager; A. M. Blauvelt, 61 Broadway, New York, secretary. The chief engineer is F. A. H. Kelly of Greenville, Tenn.

To Increase Preferred Stock.

The directors of the Augusta-Aiken Railway & Electric Corporation have announced that its authorized 6 per cent. cumulative preferred stock will be increased from \$1,500,000 par value to \$2,250,000 par value, provision being made for the accrual of dividends on the new stock only from October 1 next. The stockholders of the company are to meet June 23 to authorize the plan. It is further stated that the management intends to issue new stock in exchange for the Georgia-Carolina Investment Co., which owns the Georgia-Carolina Power Co., and that the investment company is owned by the Augusta-Aiken corporation.

Baltimore & Ohio's Statement.

The Baltimore & Ohio Railroad Co. reports for April operating revenue \$7,430,050, decrease as compared with the same month of last year \$447,073; total operating expenses \$4,890,382, decrease \$639,818; net operating revenue \$2,539,668, increase \$192,745. The greater part of the decrease in expenses was in conducting

transportation. Maintenance of equipment cost \$1,183,443, which was \$99,164 less than last year, and maintenance of way and structures was \$642,769, or \$95,398 less than last year. The decrease in transportation expenses, however, was \$477,662, the total expenditure being \$2,647,675.

The statement for the 10 months of the fiscal year up to April 30 shows operating revenue \$74,876,636, decrease as compared with the corresponding period of last year \$8,594,732; total operating expenses \$53,302,301, decrease \$8,758,170; net operating revenue \$21,574,335, increase \$163,138. The transportation expenses were \$8,801,219, decrease \$4,990,725; maintenance of way and structures \$7,382,861, decrease \$2,697,521; maintenance of equipment \$13,276,142, decrease \$845,181.

All these figures include outside operations of the company.

New Equipment, Etc.

Pennsylvania Railroad Co. has awarded equipment contracts as follows: 24 passenger cars, 12 combination passenger and baggage cars, 5 baggage cars and 6 dining cars to the Pressed Steel Car Co., Pittsburgh; 20 passenger cars, 12 combination cars and 7 baggage cars to the Standard Steel Car Co., Butler, Pa.; 20 passenger cars to the American Car & Foundry Co., St. Louis; 15 baggage cars to the J. G. Brill Company, Philadelphia; 12 baggage and mail cars to the Pullman Company, Chicago. The railroad company will also build at its own shops, Altoona, Pa., 14 passenger, baggage and mail cars and 42 baggage and mail cars. All these cars are to be of all-steel construction. In addition to the freight equipment ordered a week ago the company will build at its shops 1000 box cars, 1000 gondola cars and 102 flat cars. It has also ordered 25 consolidation locomotives from the Lima (O.) Locomotive Corporation, and 25 Mikado type locomotives from the Baldwin Locomotive Works, Philadelphia.

Chesapeake & Ohio Railway has ordered 700 steel underframe box cars and 50 cabooses from the Central Locomotive and Car Works, Chicago. The railroad company will also purchase 24 Mallet locomotives.

T. J. O'Donnell Sweetwater and Midland, Tex., will want 65 miles of 56-pound relaying rails, spikes, angle bars, etc., for a proposed railroad.

Norfolk & Western Railway is reported to have taken bids on 230 tons of bridge steel.

Glen Rose & Walnut Springs Railroad, Walnut Springs, Tex., is reported in the market through the Railroad Construction Co., 80 Fifth avenue, New York, for 4 mogul type locomotives of 65 tons each, 10 passenger cars and 100 freight cars.

Pennsylvania Railroad is reported getting prices for 1000 tons of bridge steel, this being in addition to previous purchases.

Washington, Baltimore & Annapolis Electric Railway has ordered 5 all-steel cars from the Cincinnati Car Co.

Nashville, Chattanooga & St. Louis Railway has ordered car wheels from the Southern Wheel Co., Atlanta.

Norfolk & Western Railway has ordered 1000 tons of rails from the Cambria Steel Co., Johnstown, Pa.

Richmond and City Point.

Announcement is made at Richmond that the Tidewater & Western Railway has abandoned the suggestion that it electrify its line from Chester to City Point, Va., and operate, in connection with the Virginia Railway & Power Co., trains between Richmond and City Point via Chester. There has been some expectation that the Business Men's Club, the Chamber of Commerce and the Retail Merchants' Association, all of Richmond, would take some steps to improve the transportation facilities between the two places, and something may yet be done.

A Railroad in Western Texas.

A railroad projected by W. L. Carwile of Dallas and T. J. O'Donnell of Sweetwater, Tex., from Midland, Tex., on the Texas & Pacific Railway, to a connection with the Pecos & Northern Texas Railroad of the Santa Fe system will be altogether about 150 miles long, although the first section to be built may be only 65

miles from Midland north to Lamesa, now a terminus of the Santa Fe. The line, says Mr. O'Donnell, "will serve a portion of the State that is almost without railway facilities, and the route is through a rich agricultural country that has been held in large bodies for ranching purposes. The railroad will go through the famous C ranch formerly owned by Nelson Morris of Chicago, and containing 226,000 acres, which will be cut up into small holdings and sold at reasonable terms to settlers." Application for a charter may be made within 30 days.

Improved Coaling Station.

In the establishment of a modern mechanical coaling station at Hollow Rock Junction, serving the engines on the Nashville division and portions of the Paducah and Memphis division, the Nashville, Chattanooga & St. Louis Railway has made another step in efficiency and modern methods aside from a saving of from 7 to 8 cents per ton in the handling of coal.

Under the old system coal was handled at this point under contract at a cost of 10 cents per ton. The new station also eliminates the coaling stations at Johnsonville and McKenzie, and permits a saving in time for coaling engines of from eight to ten minutes, coaling now being done in less than two minutes.

The big steel bins of the station are served by an automatic elevator, which makes a trip from the hoppers every two minutes, carrying a ton and a half of coal at each trip. The station was erected at a cost of approximately \$12,000, and is among the first of its kind in the South.

Railroad Notes.

The Carolina, Atlantic & Western Railway has established passenger service between Charleston, S. C., and Hamlet, N. C., 160 miles, operating steel car trains. It also operates to Georgetown, S. C. The road uses the union station at Charleston.

On account of grade reductions on its Chattanooga division and the use of heavier engines on the Nashville, Chattanooga & St. Louis Railway, and the consequent lengthening of its trains, improvements are under way at Craven yards near Chattanooga, where several tracks have been extended.

Contract for Piling and Trestles.

J. M. Hobbs, 898 Keogh street, Greensboro, N. C., has received a subcontract from C. W. Lane & Co. of Atlanta for all the piledriving and trestle-work on their contract for double-tracking the Southern Railway between Charlottesville and Burnley, Va.

TEXTILES

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the MANUFACTURERS RECORD. We shall be glad to have such matters at all times, and also to have any general discussion relating to cotton matters.

For a \$100,000 Company.

F. J. Haywood, secretary, and W. B. Broadfoot, superintendent, of Brown Manufacturing Co., Concord, N. C., plan the organization of a \$100,000 company to build a cotton mill. C. W. Johnston, Charlotte, president of the Brown Manufacturing Co., is to be president.

Additions to Cost \$500,000.

An investment of \$500,000 for additional buildings, machinery, etc., is planned by the Thread Mills Co. of Spray, N. C., but complete details are not ready for announcement. The immediate developments include a

bleachery, electric plant of 3000 horse-power, fine art mill of 400 to 600 box looms, each of Spray, and wide sheeting mill of 1000 looms at Draper, N. C. This company has heretofore been mentioned as to build a central power station for its various mills, and it is understood that this station is the electric plant mentioned.

The Cotton Movement.

In his report for May 21 Col. Henry G. Hester, secretary of the New Orleans Association, shows that the amount of cotton brought into sight during 294 days of the present season was 14,598,835 bales, an increase over the same period last year of 56,630 bales. The exports were 7,619,440 bales, a decrease of 856,068 bales. The takings were, by Northern spinners, 2,659,223 bales, an increase of 114,389 bales; by Southern spinners, 2,818,857 bales, a decrease of 105,550 bales.

Coosa Mill Addition.

Coosa Manufacturing Co., Piedmont, Ala., will build a 118x106-foot brick-construction addition, costing \$16,000, to No. 2 mill, for which bids have been opened. It will install 10,000 spinning spindles, 5000 twistors, etc., costing \$50,000, and electric group and four-frame drive costing \$18,000, for a daily capacity of 3000 pounds of yarn. All the machinery has been arranged for. J. E. Sirrine, Greenville, S. C., is the architect-engineer in charge.

Ensign Cotton Mills.

Ensign Cotton Mills, Forsyth, Ga., reported in March as to enlarge mill building and double spinning capacity, will add 6000 spindles and 30 cards, with other machinery. Contracts have been about closed for this machinery. The new building has not been contracted for, but it will be two stories high, with basement, 145 feet long by 75 feet wide. Lockwood, Greene & Co., Boston and Atlanta, are the architects-engineers in charge.

Crown Mills' Addition.

The Crown Cotton Mills, Dalton, Ga., will build a two-story standard brick mill construction addition 160x125 feet, a 250x100-foot weave shed, warehouses, cottages, etc. This company will add 15,000 spindles, with complement of looms and preparatory machinery. It has not completed plans.

Textile Notes.

Coats (N. C.) Hosiery Mill is now installing the equipment of machinery for its plant, about 200 dozen pairs of hose to be the daily capacity. Its machinery includes 10 horse-power gasoline engine, 41 knitters, 9 ribbers, 6 loopers, press, sewing machinery, etc., employing about 30 operatives. This company's organization with \$10,000, etc., was announced in March. E. M. Henley is president.

W. A. Manney, president of Long Shoals (N. C.) Cotton Mills, and associates have purchased the Mari-posa mill at Stanley, N. C., equipped with 3264 ring spindles, 1684 twister spindles, etc. They will add new machinery and make other improvements.

Exposition Cotton Mills, Atlanta, will erect a two-story brick building reported to cost \$11,000, and has awarded contract to Griffin Construction Co. of Atlanta.

Ratproofing New Orleans.

Up to date 35,000 buildings, or about 70 per cent. of those in the sanitary districts of New Orleans, have been completely ratproofed, and the work is continuing at the rate of 1000 buildings a week. In connection with this splendid piece of work the Dock Board of New Orleans has arranged to ratproof the wharves where the United Fruit Co.'s steamers are berthed. This will cost \$105,000, which the Dock Board has borrowed without interest from the United Fruit Co.

FOREIGN NEEDS

Machinery and equipment wanted abroad are mentioned in many letters received by the MANUFACTURERS RECORD, which is so widely read in foreign countries that we are in constant receipt of many letters from all parts of the world. For the benefit of our subscribers seeking foreign trade we publish the following extracts from recent letters:

To Represent American Manufacturers.

Santos & Mosquera, commission merchants, Plaza de San Ildefonso 6, Madrid, Spain, write to the MANUFACTURERS RECORD as follows:

"We are sending you the present letter to ask your aid in enabling us to establish an agency for the manufactures of your country. The kind of goods that we would like to handle are such as we have been accustomed to getting, previous to the war, on a large scale from Germany. We are especially desirous of getting new inventions and small articles of general utility, supplies for the counting-room and the writing desk, jewelry, etc. If we could get in contact with these people and get their aid we would fit out a sample-room showing what the people of North America can do. Of course, we would only do this provided the benefits from the service are mutual; that is, we would look for some kind of a commission or reward. What we most desire at present, is a direct means of communicating with the people of the United States, so that their products might meet the attention which is their due in our city."

Locomotives, Rails, Chemicals, Etc.

Ivan Bantcheff Kasandjief, Rue Vitochkla No. 49, Sofia, Bulgaria, writes to the MANUFACTURERS RECORD as follows:

"I would appreciate it if you would give me information as to American industries, novelties, etc. You could write in French if you wish, but it is not really necessary, though I use that language as a rule. The articles and products which interest me most are metals, zinc, copper, lead, iron, galvanized iron, sheet iron, iron bars, steel bars, rails for steam railways, tin, lead of different kind, zinc white. I would like very much to get 1200 tons of creosote for our steam railways. We have great need for locomotives, and in case the American makers are willing to correspond and to give us advantageous terms, we will give them substantial orders. We are also interested in chemical products, and I would appreciate it if you would send me the name of an American publication that would post me in that regard. I want a review, published say every week, that will go over the whole ground. One of my references is National Sewing Machine Co., Belvidere, Ill., and the Bulgarian Bank of Commerce at Sofia."

Picric Acid, Rifles, Hosiery, Etc.

Edgar Franklin & Co., 62-63 Basinghall street, London, E. C., England, write to the MANUFACTURERS RECORD as follows:

"We invoke your assistance in procuring us 1000 tons of picric acid, to be supplied in June, at \$1.73½ f. o. b. New York, net cash, the usual way through bank. Even at \$1.74 we believe to be able to obtain the contract. Ask firm able to supply to cable us offer, firm authorizing us or anyone else here to sign contract for them. Useless approaching the following makers, who cannot supply at present: Mallinckrodt Chemical Works, St. Louis; Merck & Co., New York, and Powers-Weightman-Rosengarten Company, Philadelphia. We are in a position to obtain contracts up to the end of the present year. We are also open to contract for a large quantity of Mauser or other rifles; also cotton socks."

For Brazil's Trade.

J. Carreira Junior, Vaixa Postal 163, Recife, Pernambuco, Brazil, writes to the MANUFACTURERS RECORD as follows:

"I ask you to send me names and addresses of people engaged in manufacturing the following: Cement; wheat flour; gasoline; turpentine; paints; oils; iron

goods of different kinds; firearms and munitions of war; revolvers and rifles; hats and head covering; dried fruits; preserves; gentlemen's furnishing goods; rubber collars; shirts; shoes; stockings, perfumery; silk; fancy goods in general; linen and cotton manufacturers; any article that might form part of a lady's dress or costume. We would like to get the agency for the goods we can handle here. I also desire metal stamps and seals of different kinds, rubber stamps for marking on white, and so on."

Cotton Goods and Shirts.

Hjalmar Minde, Postbox 184, Bergen, Norway, writes to the MANUFACTURERS RECORD as follows:

"I send you samples of cotton goods, and beg to ask if you can direct offers to be sent me in any of these lines. The large sample with designs fastened to patterns is shirt-stuff, and I am seeking for offers of gentlemen's full shirts of similar qualities at prices about \$3 to \$6 per dozen, with and without wristbands. From several manufacturers is wanted, say, one sample shirt of each kind, about one dozen in all from each manufactory—samples to be paid C. O. D. if wanted, and to be attended by designs or patterns. Also black shirts are wanted, being much used here. All samples must be of neck width 15-16 inches."

Wants Electric-Driven Lathe.

Gaston Champagne, 18 Rue de Belzunce, Paris, France, writes to the MANUFACTURERS RECORD as follows:

"Do me the favor of putting me in communication with people who will give me reasonable terms, free at Marseilles, no charge for packing, and also let me know when the goods can be delivered. I want a parallel lathe worked by electricity under a continuous current of 120 volts, the machine to be 900 millimeters long from end to end and 150 millimeters high. I would like to get the price, together with a design of the apparatus and a general description of the tool."

Want Military Supplies.

Bensussan, Sides & Co., Salonique, Greece, write to the MANUFACTURERS RECORD as follows:

"Get American manufacturing firms to communicate with us immediately. Send us samples, if possible, and give us prices on the following articles: Clothing and cloth and novelties for men; woolen cloth, half wool and all wool; shoes for soldiers; military supplies; cartridge belts and other kinds of belts, and in general all kinds of supplies for military."

Wanted for Porto Rican Trade.

M. Portela & Co., brokers and manufacturers' agents, Mayaguez, Porto Rico, write to the MANUFACTURERS RECORD as follows:

"We want to introduce into this island and furnish an outlet for American products, such as galvanized-iron ware, wrapping paper, paper bags, lead manufactures, flour and cornmeal, natural butter and artificial butter, rice, sugar and any kind of grain."

Wants Snap Metal Buttons.

The Atlantic Company, 104 High Holborn, London, W. C., England, writes to the MANUFACTURERS RECORD as follows:

"Put me in touch with manufacturers of snap metal buttons, similar to enclosed, in sizes 00, the smallest, 0, between the two samples, and 1, the larger of the two samples. I can do with these in both styles of finish. Put me in touch with the actual manufacturers."

Italy Wants Chemical Products.

Luceardi & Co., Piazza Castello 19, Milano, Italy, write to the MANUFACTURERS RECORD as follows:

"We ask you if you could bring us in business con-

nection with chemical firms that are willing to introduce themselves on the Italian market. As we do not receive any more chemical products from Germany, we think that the moment is the most favorable for Americans to push this line in our country. There is a big request on aniline colors, silicate of soda, caustic soda, carbonate of soda (solvay 98-100 degrees), sulphate of almina, chloride of lime, etc."

Drapery Goods Wanted.

John Murray, manufacturers' agent, 24 Howard street, Glasgow, Scotland, writes to the MANUFACTURERS RECORD as follows:

"I wish I could impress on your readers the need for drapery goods. At the moment everything is absorbed for the army and private traders cannot get delivery from manufacturers. The following is a list of immediate needs: Hosiery; gents' shirts and pants; hose and half-hose; all kinds of ladies' hosiery; towels; fancy artificial silk shawls; linens; dungarees; all cotton piece goods. If samples could be f. o. b. of the above, and state if in stock or to make, I am quite sure good results could be obtained immediately."

Paper, Chocolate Machinery, Etc.

Angelina De Calvani, Miranda a Maderero 96, Caracas, Venezuela, writes to the MANUFACTURERS RECORD as follows:

"I am very much interested in getting the addresses of manufacturers of the following goods: Colored fancy papers; gelatine papers; paraffine papers; material for the manufacture of small chocolates, fancy boxes, etc. Be kind enough to give me a few addresses of people in the above lines."

The Bender Lumber Plant.

From 90,000 to 100,000 feet lumber will be the daily capacity of the plant which C. Bender & Sons of Houston have begun to build at Humble, Tex. The main building will be of yellow pine, 180 feet long by 48 feet wide, set on concrete piers, with concrete floor. Its machinery will include an eight-foot band mill, with 40x16-inch belted gang; 84-inch edger, with 10 saws of heavy construction; automatic trimmer of overhead type for handling up to 84 feet long in multiples of two feet; auxiliary machinery for manufacturing by-products from refuse, etc. After completing this mill the firm will build a planing mill. The power plant will be of steel and brick construction, and contain six high-pressure 72x18 boilers set in steel casings, 24-inch Corliss engine to drive mill, 13x18 twin engine to drive gang, electric plant for lighting plant and employees' homes, etc. Five kilns have been installed.

Mayo-Dan Lumber Corporation.

The Mayo-Dan Lumber Corporation, Washington, D. C., will develop 12,000 acres of Blue Ridge Mountain hardwood timber land in southwest Virginia and North Carolina. It will build large mills, construct the 25-mile Mt. Airy & Eastern Railroad from Mt. Airy, N. C., to Kibble, Va., etc. Sidney Bieber and David O. Sunderland of Washington, capitalists of New York, and others are interested.

Barge No. 1 of the Macon-Atlantic Navigation Co. was launched last week at Macon, and it is expected to make its first trip to Brunswick before the end of June. The barge, which is of steel, was built at the plant of the J. S. Schofield's Sons Company at Macon, and will ply on the Ocmulgee and Altamaha rivers between Macon and Brunswick. It is 120 feet long and 24 feet beam, and has a capacity of 250 tons of freight.

As part of the Country Life Permanent Exhibition at the Grand Central Terminal in New York city a model house of semi-bungalow architecture has been erected of North Carolina pine, that wood being used wherever possible.

Illustrating to develop inventions

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MECHANICAL

Illustrations and descriptions having news value pertaining to developments in machinery, mechanical devices and inventions will be considered for use in this department.

Flory Cableway Hoisting Equipment.

A standard electric-driven cableway hoist which is made by the S. Flory Manufacturing Co. of Bangor, Pa., manufacturer of stationary and hoisting engines of all kinds, boilers, slate saws, planers, etc., is said to be constructed so as to meet the constant operation demanded of a cableway system. The hoist has two drums, each 60 inches in diameter and 60 inches long. All gears are of cast steel, with cut teeth, and machine steel cut teeth pinions are used. The frictions are the Standard Flory cone type.

The motor is 425 horse-power, operated by panel control through master controller, which, together with the levers, are placed at a convenient position for the operator. The hoist is geared for a transverse speed of 1200 feet per minute to carry a hook load of 12 tons. Specially designed shafts, bearings and base are provided for this heavy duty.

In order to meet the requirements of contractors who need special machinery, a "Patented" two-speed hoist and swinger has been developed by the company. The two-speed feature of the hoist is said to give a maximum capacity in handling all loads. On this particular hoist are utilized two

drums, 16 inches in diameter and 30 inches long, fitted with standard Flory cone-type friction. The rated capacity of the drum is 10,000 pounds at 200 feet per minute, or 4000 pounds at 500 feet per minute. All gears and pinions are the same as those specified under the Flory standard cableway hoist.

Only three gears and no extra shafts produce the two-speed effect. Either speed is obtained at the will of the operator by the movement of one lever actuating a jaw clutch. All levers and controls are placed within easy reach of the operator.

A swinger of special design with a friction drum 16 inches in diameter and 12 inches long, which is fitted with a standard Flory type friction having a spring setup, is provided. The load is held in either direction by a substantial brake.

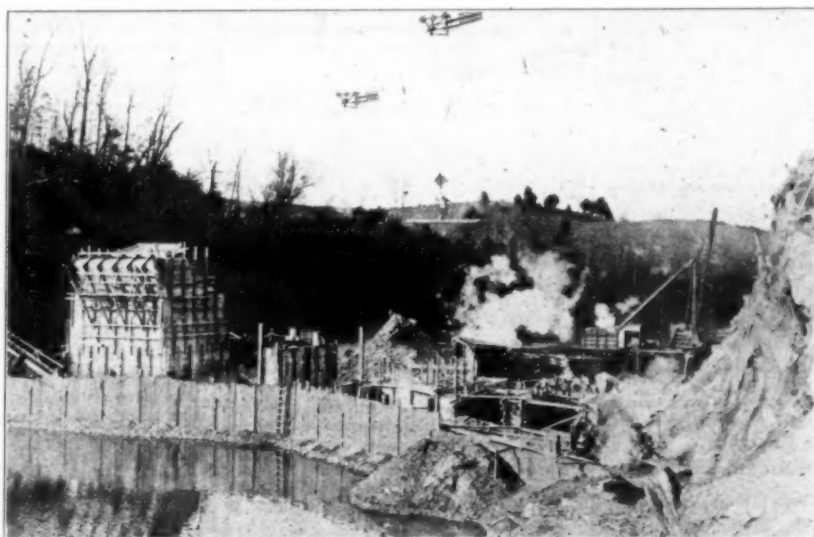
The hoist is equipped with a 75 horse-power induction motor, and the swinger with an 11 horse-power motor.

The accompanying illustration shows a five-ton capacity Flory cableway system as used by the Tennessee National Development Co. in building a dam on the Nolichucky River near Greenville, Tenn., for the operation of an electric-light plant. Another large contract employing Flory products is that of the Kensico dam of the Catskill water system for the city of New York. The equipment installed, which is all electrically driven, includes two Flory 12-ton capacity cableways, each operated with a 425 horse-power special cableway hoist; two Flory tower moving hoists for moving the 125-foot towers; 19 Flory 75 horse-power two-speed "Patented" hoists, operating traveling derricks on the dam and at the quarries, and 22 Flory 11 horse-power boom swingers operating swinging booms on the traveling derricks.

Ark-Ol Products Co.

J. W. Crotty, president and general manager, writes from the business and sales offices, Dallas, Tex., of the Ark-Ol Products Co. that the company, with \$25,000

capital, all paid in, has purchased a line of machinery which is now en route from Chicago for the first installation of a plant at Camden, Ark., for the manufacture of six or eight of the 127 by-products to be manufactured from coal or lignite under private formulae owned by the company. The factory site contains three acres of ground within the city limits of Camden. Four buildings will be erected at this time. Included in the factory and its equipment will be a battery of 11 retorts. On completion of this plant the company will manufacture a line of paints for underground and structural iron and black woodwork, also materials for waterproofing fabrics, such as tents and awnings, sheets for hospitals, etc.; fireproofing and fire extinguisher compounds, boiler compounds, disinfectants, wood preservers as a substitute for creosote, and a line of soaps, including toilet, shaving, shampoo, mechanical and stock soaps, tanning fluids and carbon. Later on it is proposed to manufacture a line of products for medical purposes for man and beast. The company owns in fee 40 acres of lignite or coal lands eight miles from Camden, on which a mine is being opened. The coal is to be conveyed from the mine to the factory, and from each ton of coal, after



NOLICHUCKY RIVER DAM, CONSTRUCTED WITH THE AID OF FLORY CABLEWAY SYSTEM.

treatment, it is stated that there will be secured approximately 25 gallons of very heavy black oil, 90 gallons of amber-colored water, 800 pounds of pure carbon, 11,300 cubic feet of non-poisonous illuminating gas and a quantity of ash.

Fletcher Enamel Co.

Recently the MANUFACTURERS RECORD presented a brief description containing the principal features of



FLETCHER ENAMEL CO.'S PLANT AT DUNBAR, W. VA.

the Fletcher Enamel Co.'s plant recently completed at Dunbar, a rapidly developing industrial suburb of Charleston, W. Va. The plant is illustrated herewith. It is the latest addition to Dunbar's manufacturing enterprises, and an idea of its extent is gained by a statement that it has a maximum daily output of 20,000 pieces of finished enameled ware. As a sheet metal-working plant it has a number of interesting and original features designed to minimize the cost of production and eliminate danger from accidents. It occupies about two acres of land on a site adjoining the Kanawha & Michigan Railroad, and consists of a large building with a floor space of about 65,000 square feet; also a smaller building, 50x120 feet. The large building is divided into four departments—stamping, 243x100 feet; enameling, 260x152 feet; shipping, 156x106 feet; grinding department, 48x144 feet. The pickling department is in a building 50x120 feet. The general type of construc-

tion is brick walls, concrete floors, steel roof trusses, steel window sash and monitor skylights. The arrangement is such that the light enters in a way that throughout the day it is as light inside as outside. The floors are all on the same level. The stamping department is equipped with a 150-horse-power gas engine and a 115-kilowatt generator, which supplies the power and lights for the entire plant. It has also a group of large drawing presses, driven by individual motors; spinning lathes; wiring and trimming lathes; double seaming machines, and numerous other smaller machines for various purposes throughout the manufacture of its wares. An interesting feature of the stamping department is its electrical welding machines used for attaching the ears and handles to kettles and saucepans, etc. The stamping room is also equipped with a line of machine tools for making all of the dies, molds, tools, etc., used throughout the factory. The enameling department is equipped with furnaces, dryers, dipping tables, bins, grinding mills, smelting furnaces, etc.; pickling department with sealing furnaces, pickling vats and dryers, shipping department with bins, trucks, etc., for convenience in handling finished wares. The sanitary arrangement throughout is complete, and considerable attention has been given in other respects to the comfort of employees.

In the stamping department the first operation is blanking the sheet steel into discs on blanking presses, after which the discs are taken to the large drawing presses, which vary somewhat in size and are drawn into shapes, and after being drawn the shapes go to the spinning department, where they are placed on spinning machines to spin out the wrinkles in the metal, after which they are sheared and beaded around the edge. From there they are taken to the welding machines and have ears and handles attached by passing a current of electricity through the metal, which melts it and forms a perfect union. From the welder they are taken to the pickling department, pickled and sent to the dipping department, where they are coated with three coats of enamel, dried and baked after each coat. For baking it requires from two to five minutes at a very high temperature. After baking the ware is taken to the assorting department, where it is assorted, wrapped and packed for shipping. The materials used in making the product are sheet steel, tinplate wire, borax, soda, sand, feldspar, acids, etc. They also use paper, straw, cartons and wooden cases for packing, the wooden cases being made of Southern gum originating in Arkansas. The product is sold over all the United States, several carloads having gone to Seattle, Salt Lake, Oakland and Denver. There are 160 male and female employees working at good wages. Some of the employees reside at Dunbar and many of them live in Charleston. The owners and managers of the plant went to Charleston about a year ago from Indiana. U. G. Fletcher is president and Solon Fletcher is secretary-treasurer, both of Charleston; M. V. Ream of New Philadelphia, O., is vice-president.

New Industries in Alabama.

The officials of the Alabama, Tennessee & Northern Railway, Russell Houston, traffic manager, Mobile, are active in obtaining the location of industrial enterprises on the route of their railroad. They have recently secured the following: Ballard Tile Co., Patterson-Eddy Lumber Co., C. F. Kitchens Lumber Co., Tallahatta Lumber Co., Thompson Bros. Lumber Co., W. P. Hodges Lumber Co., Beasley Tram Line Co. and Cobb & Derby Livestock Ranch. Enterprises that are proposed for establishment within the next 60 or 90 days are as follows: United States Cotton & Lumber Co., Fairford, three sawmills; Bollinger Lumber Co., Millry, two sawmills; Lightner Lumber Co., Gilbertown, one sawmill; Geiger Lime Rock Crusher Co., Geiger; United States Cotton & Lumber Co., livestock yard; J. B. Collins, Carrollton, planer and mill; T. H. Blake, Mile Post 55; S. O. Rogers, Little Gap.

Construction Department

IN ORDER TO FOLLOW UP

Properly the Construction Department items, please bear in mind the following statements:

EXPLANATORY

The MANUFACTURERS RECORD seeks to verify the items reported in its Construction Department by full investigation. It is often impossible to do this before the item must be printed or else lose its value as news, and in some items it is found advisable to make statements as "reported" or "rumored," and not as positive information. If our readers will note these points they will see the necessity of the discrimination. We are always glad to have our attention called to errors that may occur.

HOW TO ADDRESS

The name of one or more incorporators of a newly incorporated enterprise should always be written on letter addressed to the official headquarters or to the town of the parties sought, as may be shown in the item. Sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. By following these general directions the postoffice will generally be enabled to deliver your mail promptly, although it is inevitable that some failure by the postal authorities to deliver mail to new concerns will occur, as our reports are often published before new companies are known and before they have any established office for the receipt of mail.

WRITE PERSONAL LETTERS

In communicating with individuals and firms reported in these columns a letter written specifically about the matter reported will receive better and quicker attention than a circular. In most instances a return postal card or addressed and stamped envelope should be enclosed with letter.

In correspondence relating to information published in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

DAILY BULLETIN

The Daily Bulletin of the Manufacturers Record is published every business day in order to give the earliest possible news about new industrial, commercial, building, railroad and financial enterprises organized in the South and Southwest. It is invaluable to manufacturers, contractors, engineers and all others who want to get in touch at the earliest moment with new undertakings, or the enlargement of established enterprises. The subscription price is \$25 per year.

All advertising contracts in the Manufacturers Record for three months or longer include a subscription to the Daily Bulletin for the contract period, as well as a subscription to the Manufacturers Record.

BRIDGES, CULVERTS, VIADUCTS

Ala., New Decatur.—Stock company, capital \$40,000, will be organized to build wagon and trolley bridge across Tennessee River; E. H. Allison is interested.

Fla., Titusville.—Brevard county votes June 15 on \$150,000 bonds to construct bridges and roads. Address County Comms.

Ky., Louisville.—Jefferson County Fiscal Court let contract Hoke Co. at \$15,222.50 to construct concrete bridge over Floyd's Fork Creek on Bardstown Rd.; length 230 ft.; width 18 ft.

Mo., Joplin.—City defeated \$13,500 bonds to construct viaduct on N. Main St.; J. B. Hodgson, Commr. of Streets and Public Improvements. (Lately noted.)

N. C., Bryson City.—Swain Highway Commission will construct 300-ft. bridge across Tuckasee River; steel or concrete; bids until June 7; T. M. Howerton, Engr. (See Machinery Wanted.)

N. C., Danbury.—Stokes County Comms. let contract Austin Bros. of Atlanta, Ga., at \$1981.50 to construct steel bridge across Dan River.

S. C., Greer.—Greenville County Comms., Greenville, will construct 16 ft. span concrete bridge near Greer; bids until June 8. (See Machinery Wanted.)

Tenn., Knoxville.—City has legislative authority to issue \$150,000 bonds, proceeds of which will probably be used to construct viaduct on Gay St.; estimated cost of viaduct proper \$80,000; John W. Flenniken, Commr. of Streets and Public Improvements. (Noted in December, 1914.)

Tenn., Memphis.—W. R. Hughes & Co. are lowest bidders at \$14,664 to construct outfall culvert on Bayou Gayoso from pumping station to Wolf River; E. H. Crump, Mayor. (Call for bid and further facts lately noted.)

Tex., Cameron.—Milam County Comms. Court let contract Fred Hanna of Calvert, Tex., at \$3350 to construct and repair bridges.

Tex., Robert Lee.—Coke County Comms. let contract to construct 2 steel bridges across Colorado River, 1 near Robert Lee and other near Bronte; cost \$4385 each.

Va., Belle Haven.—Accomac county will build bridge across Occohannock Creek;

length 612 ft.; 16-ft. roadway; superstructure, wooden beam spans; substructure, piles and sheathing; bids June 3; G. P. Coleman, State Highway Commr., Richmond, Va. (See Machinery Wanted.)

Va., Portsmouth.—Norfolk County Com. of Roads and Bridges, 401 Commercial Bldg., will construct pile bridge over Paradise Creek in Western Bridge Dist.; bids until May 27; R. B. Preston, Engr. (See Machinery Wanted.)

Va., Strasburg.—Warren and Shenandoah counties will build bridge across north fork of Shenandoah River; structure 299 ft. long, 16-ft. roadway; concrete substructure; superstructure, approaches and two 115-ft. 6-in. spans; bids June 7; G. P. Coleman, State Highway Commr., Richmond, Va. (See Machinery Wanted.)

CANNING AND PACKING PLANTS

Ark., Ruddells.—White River Canning Co. will establish plant; J. R. Case, Prost.; Geo. T. Weigert, V.-P. and Secy.; Mrs. J. R. Case, Treas.; address machinery bids to J. R. Case. (Lately noted, with Arkansas Lime Co reported interested.)

Fla., Fort Meade.—S. P. King will establish vegetable cannery.

Fla., Fort Myers.—Lee County Packing Co. will erect 2 additional stories to packing plant and equip to handle 10 cars fruit daily; received bids May 26.

Ga., Columbus.—Sol Loeb will build lately-noted packing-house; brick; 1 story and basement; 25x14 ft.; concrete basement; cost \$4000; plans by C. T. Hickman.

Mo., McCoole, P. O. Dawson.—Food Products & Mfg. Co. (formerly noted as "Community Canning & Mfg. Co."), offices at Keyser, W. Va., and McCoole, inceptd. with \$10,000 capital stock, and will establish fruit and vegetable cannery; as previously stated, building will be erected locally and machinery contracts are placed. (See Miscellaneous Factories.)

N. C., Durham.—Parrish Agricultural High School (C. H. Stanton) will build cannery.

Tex., Pearland.—N. E. Meador, J. S. Cullinan, J. S. Rice and others of Houston, Tex., are reported to build fig-preserving plant to cost \$10,000.

Tex., Powderly.—W. W. Boyd, Secy. Lamar County Orchard Co., Paris, Tex., states that some of his company's stockholders contemplate establishing cannery for 1916. (See Land Developments.)

Tex., Sugarland.—W. T. Eldridge, Mgr. Imperial Sugar Co., is reported to build fig-preserving plant.

Va., Luray.—Page County Comms. invite bids until June 10 to construct steel bridge, 111 ft. long, and alternate bids on reinforced concrete bridge 105 ft. long over Hawksbill Creek at Willow Grove Mill near Luray; G. P. Coleman, State Highway Commr., Richmond, Va. (See Machinery Wanted.)

W. Va., Fairmont.—Fairmont Packing Co., capital stock \$75,000, inceptd. by M. A. Jolliff, H. Shain, M. W. Ogden and others.

CLAYWORKING PLANTS

S. C., Columbia.—Roofing.—Cementile Roofing Co., capital stock \$5000, inceptd.; G. B. Reeves, Prest.; L. A. Emerson, Secy.-Treas.

W. Va., Parkersburg.—Porcelain.—General Porcelain Co. will build addition; main building to be 300x500 ft.

COAL MINES AND COKE OVENS

Ark., Camden.—Ark-Oil Products Co., J. W. Crotty, Prest., Dallas, Tex., will operate coal mine 8 mi. from Camden; 40 acres. (See Miscellaneous Factories.)

Ky., Barbourville.—Kentucky Ridge Coal Co., Union Trust Bldg., Cincinnati, O., organized by F. D. Sampson and Lewis D. Sampson of Barbourville, Ky., and Cincinnati, O.; plans to develop 60,000 acres coal land. (Lately noted.)

Ky., Harlan.—Fort Branch Coal Co., capital \$15,000, inceptd. by A. B. Cornett, Isom C. Eads, Geo. W. Creech and others.

Ky., Viper.—R. L. Peters and others of Whitesburg, Ky., are reported to develop coal mines in Perry county near Viper.

Mo., Independence.—De Courcy-Loveland Coal & Mercantile Co., capital stock \$10,000, inceptd. by J. De Courcy, R. E. and E. B. Loveland.

Okla., Red Oak.—Oak Ridge Coal Co., capital stock \$1000, inceptd. by John B. Hilling, Jas. Hilling and E. H. Smallwood.

W. Va., Charleston.—Shook Land Co., Kanawha National Bank Bldg., Geo. E. Hice, Prest., inceptd.; capital stock \$200,000; takes over lands and mineral rights of Williams Coal Co., Kanawha, and Cabin Creek Kanawha Coal Co.; acreage about 12,000; will not operate; lease to others.

COTTON COMPRESSES AND GINS

Ala., Attalla.—North Alabama Warehouse & Compress Co., Gadsden, Ala. (officers not elected), will operate cotton compress and warehouse, for which contracts were lately noted let by J. H. Arnold & Co. of Gadsden; building contract awarded to W. T. Christopher, Gadsden; compress machinery secured.

Okla., Mountain Park.—J. W. Perkin is reported to install cotton gin.

Tenn., Memphis.—Crawford-Williamson Construction Co.'s contract (lately noted) is for erection 2-story 80x24-ft. glnhouse, 1-story 32x32-ft. engine and boiler room; reinforced concrete steel sash, brick curtain walls, fire doors, fireproof, etc.; cost of buildings \$8000; to be equipped with sprinkler system, 4-stand gin, engine, boiler, etc.; machinery contract let to Gullett Gin Co., Memphis.

Tex., Corsicana.—Corsicana Gin Co. organized by D. K. McCammon and B. F. Irvine of Corsicana and J. B. Robinson of Embouse, Tex.; will build gin; install four 80-saw gin stands.

COTTONSEED-OIL MILLS

N. C., Bladenboro.—Bladen Mfg. Co. organized with about \$50,000 capital stock by H. C. Bridger, R. L. Bridger and others; expects to erect \$40,000 plant; open bids June 1 to 15 on mill-construction building; manufacture cottonseed meal, oil, hulls and linters.

N. C., Raeford.—Hoke Oil & Fertilizer Co. let contract for redesigning and equipment of mill to American Machine & Mfg. Co., Greenville, S. C. (Previously noted to rebuild.)

Tex., Wharton.—People's Oil & Cotton Co.,

capital stock \$50,000, inceptd. by G. C. Gifford, B. C. Roberts and H. G. Forgason.

DRAINAGE SYSTEMS

Fla., Pinellas Park.—Pinellas Park Drainage Dist., P. J. McDevitt, Secy., let contract Florida Drainage & Construction Co. of Mulberry, Fla., to construct drainage system; includes 1 1/4 mi. canals 100 ft. wide, 1 1/2 mi. 50 ft. wide and 2 1/2 mi. 30 ft. wide; estimated cost \$100,000; C. M. Dechant, Ch. Engr. (Noted in December.)

La., Estherwood.—Drainage Comms. Fifth Ward Drainage Dist. No. 1, Ellis Hoffmann, Prest., let contract Ziglar Dredgeboat Co. of Jennings, La., to dredge about 25 mi. gravity drainage canals; estimated 300,000 cu. yds. excavation. (Call for bids lately noted.)

La., White Castle.—White Castle Drainage Dist. votes June 22 on \$60,000 bonds to construct drainage system; Simon Levy, Chrmn. Comms.

S. C., Marion.—Drainage Dist. (of watershed of Catfish Creek) has been formed in Marion and Dillon counties; contains about 90 sq. mi., and is about 30 mi. long; T. W. Berry, John D. Coleman and J. M. Johnson, C. E., Board of Viewers.

Tex., Eagle Lake.—Colorado County Drainage Dist. No. 1 will construct 5 ditches; total length 11 mi.; 4-ft. and 11-ft. bottoms; cost \$12,000; drain 13,500 acres for rice farming; Engr., Norris Engineering Co., Wharton, Tex. (Comms.' Court lately noted to receive bids until June 1.)

ELECTRIC PLANTS

Ark., El Dorado.—City Council granted franchise Arkansas Light & Power Co. to supply electricity for lighting and power.

Fla., Greenville.—City will install electric light plant, water-works and sewer system; equipment to include 37 1/2 K. W. generator, 60 H. P. oil engine, 50 H. P. steam engine, 7 1/2 to 100 H. P. boiler, switchboard, line wire and belt-driven pump of 9000 gals. per hour capacity; Fred A. Bishop, Engr.

Ga., Winder.—City will install electric power in place of present steam generating station; obtain electricity from Georgia Ry. & Power Co., Atlanta; latter company to extend transmission system from Gainesville to Winder; delivery about Aug. 15.

Ky., Ashland.—Ashland Electric Light & Power Co. increased capital from \$25,000 to \$32,000.

Ky., Tompkinsville.—Tompkinsville Electric Light & Ice Co., capital \$10,000, inceptd. by E. H. Smith, J. R. White and H. B. Smith.

Ky., Tompkinsville.—L. W. Preston, E. H. Smith and J. R. White of Glasgow, Ky., contemplate improvements to electric light plant; also considering construction of water-works. (Lately noted.)

La., Whitecastle.—City will install electric light plant and water-works; cost \$25,000; Xavier A. Kramer, Engr., Magnolia, Miss.

Mo., Kansas City.—St. Joseph's Hospital power plant plans ready about May 27; 1st stage, engine, generators, 30-ton ice plant, etc.; Henrich, Kent & Lowry, Consult. Engrs., 715 Reserve Bank Bldg., Kansas City; Wight & Wilder, Archts., Kansas City. (Previously noted.)

Mo., Kirksville.—City votes June 24 on \$70,000 bonds to build and equip electric-light plant and to complete rebuilding water-works. Address The Mayor.

Mo., Liberty.—City contemplates constructing electric-light plant; estimated cost \$45,000. Address The Mayor.

Mo., Troy.—City Council contracted with Southern Illinois Light & Power Co. of Hillsboro, Ill., for electricity to be distributed by city; will abandon municipal electric generating system.

N. C., Mt. Olive.—Enterprise Lumber Co. let contract to Comstock Electric Co., High Point, N. C., to install power-plant equipment, including 200 K. V. A., 600-volt, 3-phase, 60-cycle generator, 3 30 K. V. A., single-phase, 2400-600-volt transformers, 300 H. P. in motors, and 1 mi. transmission line to supply power to city of Mt. Olive. (Previously noted.)

Okla., Boswell.—Hugo Light & Ice Co., Hugo, Okla., contemplates building transmission line to Boswell.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

Okla., Hanna.—A. A. Sing is reported as contemplating construction of electric-light system.

Okla., Kingston.—City granted franchise to Geo. F. Blithen to install electric-light plant. (Previously noted.)

Okla., Mannsville.—City voted \$5500 bonds to purchase local electric-light plant. Address The Mayor. (Lately noted.)

S. C., Columbia.—City votes June 8 on ratification of franchise granted by City Council to Electric Protective Co. for electric-light system. Robt. Moorman, Chrmn. Election Commrs.

S. C., Walterboro.—City let contracts to construct electric-light, sewer and water systems; contracts include: Dysard Construction Co. of Atlanta, Ga., at \$4900 to construct electric-light system, and to R. T. Aderholt of College Park, Ga., at \$2380 to erect brick electric and pumping plant building; H. S. Jaudon Engineering Co., Engr., Box 282, Savannah, Ga.; H. W. Black, Jr., Chrmn. Commrs. (Call for bids lately noted.)

Tenn., Bristol.—City has legislative authority to issue \$100,000 bonds to build electric-light plant. Address The Mayor.

Tex., Fort Worth.—Fort Worth Power & Light Co. has contract to supply electricity for pumping water at city works; will install additional new machinery.

Tex., Slaton.—Malone Light & Power Co. of Plainview, Tex., contemplates constructing electric-light system.

Tex., Strawn.—Strawn Coal Co. will install electric-light plant, replacing present equipment.

Va., Charlottesville.—Charlottesville & Albemarle Ry. Co., J. L. Livers, V.-P., let contract to King Lumber Co., Charlottesville, to construct previously-noted substation, etc. (See Bank and Office.)

Va., West Point.—People's Light, Heat & Power Corp. will build addition to plant; installing additional unit.

FLOUR, FEED AND MEAL MILLS

Ala., Georgiana.—W. R. McGowan and J. E. Bennett will erect 3-story feed plant to cost \$15,000.

Ala., Hurtsboro.—Hurtsboro Machine Shop will establish lately-noted grist mill; E. Renfro, Pres.; C. E. Baker, Secy.; W. E. Reagor, Treas.; let contract to Delta Lumber Co., Hurtsboro, for erection 30x70-ft. fireproof building; daily capacity meal, 150 bus.; will also manufacture buggies, wagons and furniture; purchased grist mill and woodworking equipment. (See Woodworking Plants.)

Ala., Marbury.—Chas. Cooper will establish flour mill.

N. C., Caraway.—L. C. Parish will build flour mill.

Okla., Elk City.—Elk City Flour Mills Co., capital stock \$25,000, incptd. by Frank Kostka of Elk City, A. F. Dobry and F. A. Dobry of Yukon, Okla.

Okla., Pochontas.—Joe Price contemplates installing flour mill.

S. C., Hagood.—G. H. Lenoir is having plans prepared for flour mill.

Tex., Dalingfield.—Wiley & Henderson of Sanger, Tex., will build flour mill.

Tex., Edinburg.—Edinburg Grain & Milling Co., capital stock \$7000, incptd. by John F. Sim, Pres.; Clayton Dumont, V.-P.; A. Ledbetter, Treas.; W. R. Montgomery, Secy.; architect is preparing plans and specifications for corn-sheller room, corn bins and 4-bin elevator; ordered corn sheller and other equipment, including motive power.

Va., Shores.—A. L. Seay will improve flour mill; install new bolts, wheat-cleaning machinery, new feeders and middlings mill; open machinery bids June 1 to 10; daily capacity 35 bbls. (See Machinery Wanted.)

Va., Tamworth.—A. F. Moon will install additional machinery in flour mill.

FOUNDRY AND MACHINE PLANTS

Ala., Anniston.—Malleable Foundry.—Kilby Locomotive & Machine Works will install lately-noted malleable plant, but will not erect building; has 60x200-ft. brick structure; will install equipment of 8 to 10 tons daily capacity. (Machinery lately noted wanted.)

Ky., Highland Park.—Continental Car Co. (A. B. McKinley and others, Louisville) will acquire and operate plant of Continental Car & Equipment Co. at Highland Park. (Lately noted incptd., under Louisville, with \$40,000 capital stock.)

Ky., Owensboro.—Foundry.—Anglo-American Mill Co., Central Trust Co. Bldg., decided not to construct foundry during this year. (Lately noted to build addition.)

Md., Baltimore.—Shrapnel.—Poole Engineering & Machine Co. will install machinery to manufacture shrapnel; has ordered equipment; reports state company has large contracts from Europe.

Tex., Dallas.—Culverts.—Butt Joint Nestable Culvert Co., capital stock \$75,000, incptd. by A. W. Nelson, Geo. C. Oliver and J. H. White.

Tex., Fort Sam Houston.—Blacksmith Shop. Quartermaster Dept. plans erection of blacksmith shop. (See Government and State, under Buildings Proposed.)

Va., Norfolk.—Ship Work, etc.—Geo. W. Duval & Co., 900 Water St. (In Apr. noted incptd., capital stock \$75,000), consolidated with Norfolk Foundry, Ridgwell & Hall, Props.; Jas. A. Ridgwell, Pres. of new company; Wm. H. Ridgwell, V.-P.; Arthur J. Hall, Secy.-Treas.; steamboat building and repairing, machinists, boiler-makers, iron and brass foundry, etc.

GAS AND OIL ENTERPRISES

Ark., Newport.—Independence Oil Co., capital stock \$10,000, incptd. by S. Heinmann, Joe Heinmann, Thekla Heinmann and others.

La., Alexandria.—South Abington Lease & Development Co., capital stock \$50,000, incorporated; Jas. C. Seiser, Pres.; J. M. S. Whittington, V.-P.; J. E. Lansing, Secy.-Treas.

La., Shreveport.—E. K. Smith, Shreveport; F. B. Keech & Co., New York, and others are reported planning organization \$2,000,000 corporation to develop, for gas and oil, 33,000 acres in northwestern Louisiana; property said to include Whitely & Wheeler cut-over timber lands, 30,000 acres, in Bossier parish.

Mo., Kansas City.—Oil Refinery.—Producers' Refinery Co., capital \$600,000, incptd. by L. A. Oliver, F. M. Thwing and H. M. Evans.

N. C., Wilson.—Gas Plant.—City votes July 6 on \$250,000 bonds to build gas plant, etc. Address The Mayor. (See Water-works.)

Okla., Bartlesville.—Nyokla Gas Co., capi-

capital stock \$12,000, incptd. by L. R. Barton, J. T. Hall and H. L. Edens.

Tex., Burton.—German Central Oil Co., capital stock \$26,000, incptd. by F. M. Todd, R. E. Cole and C. W. Homeyer, Jr.

Tex., Dallas.—Dallas-Thrall Oil Co., capital stock \$12,000, incptd. by E. L. Austin, C. C. Doyle and W. E. Templeman.

Tex., Elgin.—Manon-Travis Oil Co., capital stock \$20,000, incptd. by Miles Bennett, W. V. Bowles and W. E. McCullough.

Tex., Fordtran.—Fordtran Oil & Gas Co. organized with J. A. Robertson, Pres.; J. R. Hill, V.-P. and Gen. Mgr.; T. J. Hill, Secy.

Tex., Hutto.—Palm Oil & Gas Co., capital stock \$25,000, incptd. by E. Zeverin, Harry Mauritz and J. A. Johnson.

Tex., Houston.—Victory Oil Co., capital stock \$10,000, incptd. by E. A. Adelman, J. J. Castell and J. M. Heiser.

Tex., Jacksonville.—Cherokee County Oil Co., capital stock \$10,000, incptd. by O. L. Miller, M. B. Canon and A. O. W. Frederick.

Tex., Jacksonville.—Uncle Sam Oil Co., capital stock \$15,000, incptd. by J. H. Pressler, W. D. Bolton and W. H. Willis.

Tex., Jarrell.—Jarrell-Thrall Oil Co., capital stock \$14,000, incptd. by H. E. Root, J. F. Tekyl and R. N. O'Neal.

Tex., Mexia.—Gasoline.—Zeno King contemplates establishing plant to manufacture gasoline; now investigating methods, prices on machinery, etc. (See Machinery Wanted.)

Tex., San Antonio.—Premier Oil Co., capital stock \$15,000, incptd. by F. Kent, Charles Mernitz and Paul Breyman.

Tex., Thorndale.—Thrall Home Oil Co., R. M. Barnes, Secy. (lately noted incptd., capital stock \$15,000) will develop oil land; needs pumps, fittings, tanks, etc. (See Machinery Wanted.)

Tex., Weir.—Thrall-Weir Oil Co. (lately noted incptd., capital stock \$8000) asks prices on drilling machinery; J. W. Hale, Engr. (See Machinery Wanted.)

PROPOSAL ADVERTISEMENTS IN THIS ISSUE

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ICE AND COLD-STORAGE PLANTS

Ala., Birmingham.—Birmingham Ice Factory let contract Herndon-Hettrick Engineering Co. to build cold-storage plant; 68x120 ft.; 5 stories; brick, reinforced concrete and steel; cork lining; cost \$75,000 to \$80,000. (Lately noted.)

Ala., Roebuck Springs (Station Birmingham).—Ross C. Smith is interested in plans to build ice factory to supply Roebuck Springs and East Lake.

Ky., Tompkinsville.—Tompkinsville Electric Light & Ice Co., capital \$10,000, incptd. by E. H. Smith, J. R. White and H. B. Smith.

Mo., Kansas City.—St. Joseph's Hospital will install 30-ton ice plant. (See Electric Plants.)

Tenn., Columbia.—Columbin Ice & Cold-Storage Co., capital \$100,000, incptd. by Frank D. Chaffin and W. S. Beasley of Columbia, W. J. Rushton of Birmingham, Ala., and others. (Lately noted let contracts for machinery, building, etc., for ice plant.)

Tenn., Knoxville.—New Crystal Ice Co., capital \$40,000, incptd. by H. W. Lynn, J. H. Lynn, H. A. Harth, Forest W. Andrews and C. E. Lucky; purchased 50-ton ice plant.

Tex., Dallas.—Nelson-Morris Packing Co. of Chicago, Ill., is reported to have purchased site on which to build branch distribution plant.

Tex., El Paso.—Houston Ice & Refrigerator Co. will erect brick storage building, office and bottle-house; cost \$6400.

Va., Bristol.—Holston Creamery Co. is installing proposed refrigerating machinery and cold-storage rooms for ice-cream plant of 500 gals. daily capacity; J. Paul Jones, Bristol, Tenn., Pres. of company; O. L. Darter, V.-P. and Mgr.; John W. Price, Secy.-Treas. (See Miscellaneous Factories.)

IRON AND STEEL PLANTS

Ala., Shelby.—Iron Furnace.—Shelby Iron Co. will blow in blast furnace; daily capacity about 55 tons charcoal iron.

LAND DEVELOPMENTS

Ala., Birmingham.—Southern Park & Amusement Co., capital stock \$25,000, incptd.; H. H. Black, Pres.; Dora D. Black, V.-P.; Bell Wheeler, Secy.-Treas.

Fla., Miami.—Palm Beach & Everglades Land Co., capital stock \$5,000,000, incptd.; J. A. Moore, Pres.; A. J. Rose, V.-P.; C. H. Reeder, Secy.-Treas.

Fla., Vero.—Conkling-Vero Nurseries Co., capital stock \$25,000, incptd.; A. W. Young, Pres.; R. A. Conkling, V.-P.; R. L. James, Secy.-Treas.

Ky., Ashland.—Russell Land Co., capital \$5000, incptd. by E. L. Bock, Elizabeth Bock, R. K. Mehurin and F. W. McConnell.

Ky., Harlan.—Combs Land Co., capital \$30,000, incptd. by J. R. Sampson, Wm. Sampson, J. E. Sampson and Palmer A. Paddock.

Ky., Lexington.—C. B. Shaffer of Chicago is reported to expend about \$25,000 for improvements on 84-acre farm, to include gates, macadamized roads and landscape work.

Ky., Louisville.—Jefferson County Land Co., capital \$5000, incptd. by John W. Tucker, Homer Tucker and John H. Chandler.

La., Bogalusa.—Bogue Chitto Stock Farm Co. organized with W. H. Sullivan, Pres.; D. T. Cushing, V.-P.; M. L. Wuescher, Secy.-Treas.; has 200 acres farming land; will raise stock; erect barns, pipe water from artesian well to tank, build dwellings, etc.

Md., Cumberland.—Dingle Park Land Co. organized with Robt. E. King, Pres.; Wm. C. Devecmon, V.-P.; O. L. Shirey, Treas.; John I. Vandegriff, Secy.

N. C., Quail Roost Farm.—Quail Roost Co., capital stock \$50,000, incptd. by Jas. S. Cobb, Durham, N. C.; Clinton W. Toms, Thos. B. Guille and Caleb C. Dula, all of New York.

Okla., Geary.—Valley Farm Produce Co., capital stock \$1500, incptd. by Matthew Hinger, W. C. Geary and W. N. Draper.

S. C., Charleston.—Wellbrook Fruit Co., capital stock \$7500, incptd. by J. C. Wellbrook, L. H. Stello and F. W. Jensen, Jr.

Tex., Odem.—Odem Townsite Co., capital stock \$25,000, incptd. by A. R. Ponder, M. E. Leming and Grant Frederick.

Tex., Mission.—J. C. Engleman Land Co., capital stock \$5000, incptd. by J. C. Engleman, S. B. Smith and H. P. Hansen.

Tex., Powderly.—Lamar County Orchard Co. organized; J. N. Bailey, Pres.; W. W. Wood, Secy.; W. E. Boyd, Treas.; main office at Paris, Tex.; developing 120 acres, near Powderly, in Elberta peaches; some of stockholders contemplate establishing canning factory for 1916. (Lately noted incptd. at Paris, Tex., with \$5000 capital.)

Va., Richmond.—Cucharus Land & Water Corp., capital stock \$125,000, chartered; Ernest R. Flippen, Pres.; W. G. L. McGuire, V.-P.; Andrew D. Christian, Secy.-Treas.

W. Va., Charleston.—Shonk Land Co. (lately noted incptd., capital \$200,000), National Bank Bldg., Geo. E. Price, Pres., will develop coal lands. (See Coal Mines and Coke Ovens.)

LUMBER MANUFACTURING

Ala., Carrollton.—J. B. Collins contemplates establishment of planer and mill.

Ala., Fairfield.—U. S. Cotton & Lumber Co. contemplates establishment of 3 sawmills.

Ala., Millry.—Boiling Lumber Co. contemplates establishment of 2 sawmills.

Ark., Little Rock.—Rieff & Co., 16th and High Sts., will rebuild planing mill reported burned at loss of \$4000 on building and \$5000 on machinery.

Ky., Hickman.—Mengel Box Co. (main office, Louisville, Ky.) purchased 1360 acres timber land and will develop; timber to be delivered to company's box factory at Hickman.

Miss., Brandon.—Green Bay Lumber Co. is reported as contemplating erection of steel and concrete mill.

Mo., St. Louis.—Holekamp Lumber Co. will increase planing-mill equipment. (Lately noted to increase capital from \$40,000 to \$75,000.)

N. C., Mt. Airy.—Mayo-Dan Lumber Corp., Mt. Airy and Washington, D. C., will complete mill plans about June 3; has purchased mill, machinery, shafting, etc.; will develop 12,000 acres hardwood timber land in North Carolina and Southwest Virginia, build mills, construct Mt. Airy & Eastern R. R. from Mt.

Airy to Dibble, Va., 25 mi., etc. (Lately noted.)

N. C., Wilmington.—W. J. Norris of Holly Springs, N. C., purchased about 5,000,000 ft. stumpage on Northeast River near Wilmington, and will install saw and planing mill on Smiths Creek; weekly capacity 100,000 ft.

Tex., Humble.—C. Bender & Sons (Eugene L. and Frank Bender), Houston, Tex., will build sawmill to replace present plant; daily capacity, 80,000 to 100,000 ft.; main building, 48x180 ft.; yellow pine; solid concrete piers with concrete floors; install 8-ft. hand mill with 40x16-in. belted gang, 84-in. edger with 10 saws, automatic trimmer of overhead type to trim up to 84 ft. long, multiples of 2 ft.; auxiliary machinery to manufacture by-products from refuse; build power plant of steel and brick construction; contain 6 high-pressure 72x18 boilers set in steel casings, 24-in. Corliss engine to operate mill and 13x18 twin engine to drive gang; electric plant in engine-room to light entire plant and employees' homes; installed 5 drykilns; after sawmill is built will erect planing mill and install machines now in use; will construct water-works with high tank and tower.

Tex., Palestine.—North Texas Lumber Co., Wesley Morse, Prest., Kildare, Tex., plans to build sawmill, planing mill, drykilns, etc., lately noted.

MINING

Ark., Dodd City.—Lead and Zinc.—W. A. McCurry is reported to build concentrating plant.

Ga., Atlanta—Mica, etc.—American Mica Co., capital \$10,000, inceptd. by G. N. Randolph and R. S. Parker of Atlanta, Ga.; A. Rust-Oppenheim and L. Taylor of New York.

Mo., Joplin—Lead and Zinc.—Gotham Mining & Milling Co., capital \$10,000, inceptd. by W. R. Davis, Julius Jruerger and M. S. Jakowsky.

Mo., St. Louis—Zinc, etc.—Chanute Splitter Co., capital stock \$500, inceptd. by Sol Roos, Wm. Simon and Edgar R. Rombauer.

Mo., Webb City—Lead and Zinc.—Cunard Mining Co., capital \$50,000, inceptd. by T. H. Walker, J. D. McCain and W. E. Smith.

Okla., Miami—Zinc.—McConnell Zinc Mining Co., capital stock \$25,000, inceptd. by O. J. McConnell and O. M. Confer of Miami and T. F. Lennan of Joplin, Mo.

Okla., Tulsa—Lead and Zinc.—Tulsa Mining Co. contemplates building concentrating plant.

Tenn., Knoxville—Marble.—Consolidated Marble Co., J. B. Jones, Prest., Box 325, will develop marble quarry; 30 acres; has machinery.

Tex., Somerville—Fuller's Earth.—Robt. Brantley will rebuild burned fuller's-earth plant.

MISCELLANEOUS CONSTRUCTION

Ala., Cordova—Wharves.—St. Louis & San Francisco R. R., F. G. Jonah, Ch. Engr., St. Louis, Mo., is reported to expend \$30,000 on wharves and loading facilities along Warrior River.

Ala., Tuscaloosa—Wharf.—Birmingham & Tuscaloosa Ry. & Utilities Co. has plans for wharf and freight warehouse to be erected at Riverview on Warrior River; wharf to be of concrete construction throughout and equipped with electric cranes, etc. (Lately noted.)

Fla., Key West—Seawall and Breakwater.—Monroe County Commrs. will petition Legislature for authority to vote on \$300,000 bonds to construct breakwater and seawall from foot of Duval St. to head of Island on southeast side, and from head of Island to Trumbo on northwest side.

Fla., Tampa—Retaining Wall.—City let contract Edwards Construction Co. of Tampa at \$5921.40 to construct concrete retaining wall at waterfront of Plant Park; about 834 lin. ft.; D. B. McKay, Chrmn. Commrs. of Public Works. (Call for bids lately noted.)

Fla., Tampa—Wing Walls.—Hillsborough county will construct wing walls on Tampa-Plant City Rd.; County Commrs., W. P. Culbreath, Clerk, receive bids until June 2; Geo. Fuchs, Engr. of Roads, Tampa. (See Machinery Wanted.)

La., Natchitoches—Dams.—Natchitoches Parish Police Jury voted to construct 2 dams across Cane River.

La., New Orleans—Wharf Improvements.—Dock Board will ratproof Julia St. Wharves, where United Fruit Co.'s passenger and freight lines are berthed; estimated cost \$105,000.

Miss., Vicksburg—Levee.—Third Mississippi River Dist., P. O. Box 404, will con-

struct about 660,000 cu. yds. levee enlargement; bids until June 5. (See Machinery Wanted.)

N. C., Southport—Wharf.—Government will construct wharf, etc., for Cape Fear Quarantine Station; bids opened June 25. (See Machinery Wanted.)

S. C., Columbia—Heating Plant.—University of South Carolina let contract F. L. Waldrop of Rock Hill at \$11,555.50 to extend central heating plant; plans by Wilson & Sompayrac, Palmetto Bldg., Columbia; August Kohn, Chrmn. Building Committee. (Call for bids lately noted.)

S. C., Spartanburg—Underpass.—Southern Ry., W. H. Wells, Ch. Engr. of Constr., Washington, D. C., will construct previously-noted underpass for passengers; subway 39 ft. wide and 110 ft. from outside of depot building; minimum headroom, 8 ft. 3 in.; electric lights, stairways, doors, seats, etc.; contracts let jointly to M. M. Elkan, Macon, Ga., and R. B. Tufts, Norfolk, Va.

Tenn., Memphis—Retaining Wall.—City let contract Noll Construction Co. at \$5351.75 to construct retaining wall along Illinois Central R. R. from Keel Ave. north.

Tex., Caldwell—Earthwork.—Burleson County Improvement Dist. No. 1 will construct about 360,000 cu. yds. earthwork in levees and small amount in drain ditches; bids until June 26; J. C. Nagle, Engr., Austin; R. S. Newson, Chrmn. Commrs. (See Machinery Wanted.)

Va., Ashland—Dam.—E. C. Newman let contract to McCaughey & Van Doren, 300 Commonwealth Bank Bldg., Richmond, Va., to construct reinforced concrete dam across St. Ann's River at Ellicott's Crossing; cost about \$8000.

MISCELLANEOUS ENTERPRISES

Ala., Bessemer—Plumbing and Tinning.—Jas. H. Sullivan let contract to Crotwell Bros. Lumber Co., Bessemer, to erect building for plumbing and tinning shop; 2 stories; 25x110 ft.; first floor walls 14 ft.; second, 10 ft.; brick; tar and gravel roof; first floor cement and tile; second, wood; grates and heaters; electric lighting; cement sidewalks; cost without mechanical equipment, \$3500; W. E. Bennis, Archt., Bessemer.

Ala., Birmingham—Transfer.—Birmingham, Ensley & Wylam Transfer Co., capital stock \$2000, inceptd. to operate transfer line between Ensley and Wylam; W. E. Hyde, Prest.-Treas.; Poteos Vakakes, V.-P.; Jas. Vakakes, Secy.

Ala., Fairford—Livestock Yard.—U. S. Cotton & Lumber Co. contemplates establishment of livestock yard.

Ga., Columbus—Paving Material.—Georgia-Florida Hendersonian Paving Co. inceptd., \$100,000 capital stock, by J. M. Crawford, C. C. Peters, Columbus, and Geo. A. Henderson, New York; takes over sales rights for Georgia and Florida, of paving material made by International Hendersonian Co., 17 Battery Pl., New York.

Ky., Hazard—Publishing.—Herald Publishing Co. increased capital from \$2500 to \$5000.

Ky., Louisville—Water.—National Pure Water Co. (Louisville Branch), capital stock \$60,000, inceptd. by A. C. Grey, L. T. Jones and Logan N. Rock.

Ky., Owensboro—Publishing.—Owensboro Publishing Co., capital \$1000, inceptd. by Kink Haynes, Zack Davis, J. A. Morton and others.

La., New Orleans—Grain Elevator.—Dock Board sold \$1,250,000 bonds to build grain elevator and terminals; concrete reinforced with steel; fireproof; capacity, 1,000,000 bu. grain; plans have not been completed; Ford, Bacon & Davis, Engrs., 921 Canal St., New Orleans. (Lately noted.)

Mo., Joplin—Incinerator.—City defeated \$12,500 bonds to build incinerator; Dr. R. D. Hill, Health Commr. (Lately noted.)

Mo., Kansas City—Grain Elevator.—Atchison, Topeka & Santa Fe Ry., C. F. W. Felt, Ch. Engr., Chicago, Ill., will enlarge grain elevator; addition to be of reinforced concrete and consist of 28 cylindrical bins; each bin 36 ft. in diam. and 90 ft. high, increasing capacity of elevator by 2,062,000 bus.; present elevator contains 72 similar bins; contract for superstructure let to Wells Bros. Co., 53 W. Jackson Blvd., Chicago.

Mo., St. Louis—Decorating.—Gilmore-Bonfig Decorating Co., capital \$6000, inceptd. by H. G. Gilmore, Carl Bonfig and H. C. Imel.

Mo., St. Louis—Printing.—Clark-Sprague Printing Co., capital stock \$5000, inceptd. by Chas. A. Clark, Allen W. Clark and Warren R. Sprague.

N. C., Lexington—Publishing.—Lexington Herald, capital \$25,000, is being organized by

J. F. Hargrave, C. C. Hargrave, J. D. Grimes, G. F. Hankins and others; ordered printing plant, including cylinder press, linotype machine, etc.

Okla., Chattanooga—Grain Elevator.—G. G. Black, Hollister, Okla., plans to build grain elevator.

Okla., May—Grain Elevator.—Farmers' Elevator Co., capital stock \$6000, inceptd. by Chas. Jones, W. F. Gray, F. W. Sempter and G. W. Leist.

Okla., Mountain Park—Grain Elevator.—Blackwell Mill & Elevator Co., Blackwell, Okla., plans to build grain elevator.

Okla., Stillwater—Grain Elevator.—Stillwater Cotton & Grain Co., capital stock \$10,000, inceptd. by Geo. M. Thompson, Arthur W. Thompson and J. T. Perryman, Jr.

Tex., Fort Worth—Grain Elevator.—J. Rosenbaum Grain Co., capital stock \$50,000, incorporated by W. M. Short, P. A. Crane and J. Rosenbaum.

Tex., Megargel—Graham Mill & Elevator Co., Graham, Tex. (lately noted as letting contract), is building grain-receiving elevator of 10,000 bu. capacity, cost about \$3500, at Megargel; also installing \$500 loading rack at Westover; these installations as feeders for mill at Graham.

Tex., San Antonio—Crushed Stone.—Beckman Crushed Stone Co., capital stock \$15,000, inceptd. by J. I. Gray, E. E. Krueger and D. A. McAskill.

Tex., Texas City—Fisheries.—Texas Star Fisheries Co., capital stock \$10,000, inceptd. by W. D. Baggett, E. H. Neff and N. Tatsukawa.

Tex., Westover—Loading Rack.—Graham Mill & Elevator Co., Graham, Tex., is installing \$500 loading rack. (See Tex., Megargel.)

Va., Richmond—Transfer.—Petersburg City Point Transfer Co., capital \$15,000, inceptd.; Jas. E. Crass, Jr., Prest.; Lewis E. Twining, Secy.-Treas.

Va., Richmond—Gas and Electric Fixtures.—Richmond Gas & Electric Fixture Co., capital \$25,000, inceptd.; H. E. Bullington, Prest.; W. P. Neblett, V.-P.; W. F. Folkes, Secy.-Treas.

W. Va., Keyser—Greenhouse.—C. L. Wiseman is interested in building of 30x300-ft. greenhouse. (See Machinery Wanted.)

W. Va., Parkersburg—Publishing.—State Journal Co. will erect lately-noted printing office building at cost of \$6000; 30x110 ft.; ordinary construction; slag roof; concrete floor for first story, wood for second; small elevator for forms; plans by R. H. Adair, 501½ Juliana St.; bids opened about May 25.

MISCELLANEOUS FACTORIES

Ala., Birmingham—Beverages.—Alabama Beverage Co. increased capital stock from \$12,000 to \$15,000.

Ark., Camden—Paints, Disinfectants, etc.—Ark-Off Products Co., business and sales office, Dallas, Tex., J. W. Crotty, Prest. and Gen. Mgr., capital \$25,000, has factory site of 3 acres; will at present erect 4 buildings; install machinery (previously noted purchased) to manufacture coal or lignite by-products; equipment includes 11 retorts; in this plant will manufacture paints for underground and structural-iron and black woodwork, materials for waterproofing fabrics, fireproofing and fire-extinguisher compounds, boiler compounds, disinfectants, wood preservers, tanning fluids and carbon; later contemplates manufacture of medical products; has 40 acres lignite or coal lands 8 mi. from Camden; will mine coal and convey to factory.

Fla., Fellsmere—Farm Gates.—E. E. Commons, F. H. Trimble, Arthur Jennings and others are reported as contemplating establishment of plant to manufacture farm gates.

Fla., Jacksonville—Ice Cream.—Geo. M. White will establish ice-cream factory.

Fla., Tampa—Cigars.—Florida-Havana Cigar Co., capital stock \$10,000, inceptd.; Jos. Walicki, Prest.; S. J. Ormston, V.-P.; M. M. F. Dempsey, Secy.-Treas.

Fla., Wauchula—Naval Stores, etc.—Wau-chula Co., capital stock \$1,200,000, inceptd.; H. Vandalah, Prest. and Gen. Mgr.; A. McInnis, Secy.; Maxwell Boster, Treas.

Ky., Louisville—Harness and Saddlery.—Forman-Breen Mfg. Co., 1122 Rowan St., purchased building at Preston and St. Catherine Sts. and will remove plant; increase capacity 50 per cent. and install electric power and special machinery.

Ky., Louisville—Tires and Rubber.—Peerless Tire & Rubber Co. increased capital stock from \$10,000 to \$25,000.

Ky., Louisville—Cigars.—Eitel & Cassebohm leased one of buildings of dismantled

Falls City Woolen Mills and will equip as cigar factory; structure is 2 stories; 42x16 ft.

Ky., Louisville—Chemicals.—Southern Chemical Co., capital stock \$2500, inceptd. by Ben F. Vogt, Brainard Lemon and G. T. Love.

Ky., Louisville—Photo Films.—Kentucky Photo Film Co., capital stock \$25,000, inceptd. by Otto Schaefer, E. O. Schaefer and R. M. Jones.

La., New Orleans—Mattresses.—Southern Mattress Co. will rebuild plant lately noted burned; has several plans under consideration; temporarily located adjacent to burned plant, 331 Decatur St.

Md., McCoole, P. O. Dawson—Food Products, etc.—Food Products & Mfg. Co. (lately noted inceptd.), offices at Keyser, W. Va., and Coole, organized with Dr. G. W. Umsted, Prest.; J. F. Richards, 1st V.-P.; Dr. F. P. Stehley, 2d V.-P.; W. C. Bowden, Secy.; T. H. Frankhouser, Treas.; C. L. Wiseman, Asst. Secy.; will maintain fruit and produce exchange, conduct canning and preserving, etc.; 2-acre site; building materials to be supplied locally; machinery arranged for; contemplates cultivation of broom corn, with establishment of broom factory for operation next winter, and later, installation of plant to manufacture lime sulphur solution for spraying. (See Canning and Packing Plants, and Machinery Wanted.)

Mo., Kansas City—Silix Mfg. Co., capital \$10,000, inceptd. by C. E. Silix, A. C. Kaser and Thos. M. Hunter.

N. C., Winston-Salem—Sausage.—N. B. Williams purchased building and will equip as sausage factory.

N. C., Winston-Salem—Confections.—Vanola Co., capital \$500,000, inceptd. by G. A. Vogler, C. S. Starbuck, A. H. Bahnsen and others.

Okla., Durant—Peanuts.—J. E. Jensen and others have plans for building and equipping peanut mill.

Okla., Madill—Aeroplanes.—Bounds Aeroplane Co., capital stock \$3500, inceptd. by Overton Bounds, J. E. McMillan and E. H. Baldwin.

Okla., Oklahoma City—Products Mfg. Co. will double capacity of plant; install soap machinery.

S. C., Greenville—Scott Mfg. Co., capital stock \$25,000, inceptd. by W. M. Scott, L. T. Shirley, V. E. McBee and O. K. Mauldin.

S. C., Sumter—Optical Goods.—Highsmith Optical Co., capital stock \$2000, inceptd.; Z. F. Highsmith, Prest.-Treas.; V. F. P. V.-P.; A. E. Highsmith, Secy.

Tenn., Chattanooga—Creamery.—Peerless Creamery Co., capital stock \$10,000, inceptd. by W. C. Denton, I. G. Phillips, J. S. Rogers and others.

Tenn., Knoxville—Marble.—Tennessee Producers' Marble Co. let contract J. M. Dunn & Son to erect marble mill; one structure 54x200 ft. and other 80x245 ft.; concrete, brick and steel construction; cost of buildings \$75,000.

Tenn., Tullahoma—Gates.—Success Automatic Gate Co., John T. Walston, Box 342, interested, will manufacture farm gates; asks prices on metals, parts, pipe, wood-working machinery, etc. (See Machinery Wanted.)

Tex., Amarillo—Silos.—Southwestern Craine Silo Co., capital stock \$10,000, inceptd. by H. W. Galbraith, J. C. Galbraith and W. R. Armstrong.

Tex., Beaumont—Bakery.—Gerlach Baking Co., capital stock \$10,000, inceptd. by C. F. Gerlach, H. B. Lindsey and R. L. Paderna.

Tex., Fort Worth—Note Boards.—Sessions Note Board Co., capital stock \$25,000, inceptd. by H. E. Sessions, A. A. Vardell and W. A. Bennett.

Tex., Fort Worth—Freezers.—Casimir Freezer Co. of Texas, capital stock \$10,000, inceptd. by C. J. Turner, T. M. Hudgins and Mrs. M. J. Cox.

Tex., Houston—Silos.—Southern Farmers' Silo Co., capital stock \$14,000, inceptd. by D. A. Weis, J. C. Meininger and Sidney H. Weis.

Va., Bristol—Creamery.—Holston Creamery Co., J. Paul Jones, Prest., is installing refrigerating machinery and cold-storage rooms, and contemplates installing butter plant in the fall; ice cream capacity is 500 gals. daily. (See Ice and Cold-storage Plants.)

Va., Richmond—Tobacco.—Falk Tobacco Co. will erect 2-story brick addition to plant at 22d and Franklin Sts.; cost \$6000.

Va., Richmond—Railway Signals.—Hudson Railway Signal Co., Room 204 Park Bldg. (lately noted inceptd., capital \$500,000), will

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manufacture Hudson gravity railway signal device; has not decided to build plant; for the present may use plant already established; W. J. McAughy, Pres.; Robt. F. Hudson, Secy.; J. H. Headen, Treas.; Thos. S. Winston, W. S. Forbes, Warner Moore, Geo. B. Hutchings, directors.

W. Va., Fairmont—Carbon—C. B. Steele and others are organizing company with \$50,000 capital stock to manufacture carbon; will erect building, 2 stories, of structural iron and brick.

W. Va., Huntington—Paper Towels.—Huntington Paper Towel Co., capital stock \$25,000, incept. by C. T. Taylor, C. C. Hogg, Geo. S. Wallace and others.

W. Va., Richwood—Wood Extracts.—Cherry River Extract Co. (W. B. Mosser Co., Philadelphia, Pa.) will establish plant to manufacture wood extracts; is reported to erect 2-story 300-ft. concrete and steel building; purchased 190,000 acres chestnut timber land; report states will invest \$300,000 for plant. (Lately noted.)

MOTORS AND GARAGES

Mo., Baltimore—Garage.—G. W. Eisenhauer, Blue Ridge Summit, Pa., is having plans prepared by Chas. M. Anderson, 324 N. Charles St., Baltimore, for garage at North Ave. and Lovegrove Alley. (Lately noted.)

Mo., Kansas City—Automobile Supplies.—Kansas City Auto Parts Co., 1827 McGee St., deals in and jobs automobile supplies and parts. (Lately noted incept., capital \$200,000.)

Mo., St. Louis—Garages and Repair Shop.—Sterling Transport & Auto Co. will build row of public garages and repair shop; site 12x34 ft.

N. C., Charlotte—Automobiles.—Overland Carolinas Co., capital stock \$50,000, incept. by G. S. Talby of Charlotte, W. H. Dall and M. B. Dall of Greensboro.

N. C., Wilmington—Automobile Parts.—Auto Inspirator Co., capital \$25,000, incept. by John O. Brock and Lillie C. Brock of Wilmington, W. B. Simmons and Hester E. Simmons of Hampstead, N. C.

Va., Newport News—Automobile Line.—City Jitney Corp., capital \$50,000, chartered; J. N. Shannahan, Pres.; R. M. Booker, Secy., both of Hampton, Va.

N. C., Spencer—Automobile Line.—Spencer Jitney Co., capital \$10,000, incept. by T. M. Stainback, I. S. Brown and R. M. Brown.

N. C., Winston-Salem—Automobile Line.—Auto Transportation Co., capital \$120,000, incept. by R. M. Cox, S. L. Vest and Hillis E. Vest.

Okla., Oklahoma City—Automobiles.—Sutton-Johnson Motor Co., capital stock \$1000, incept. by G. M. Sutton, C. E. Sutton and E. C. Johnson.

S. C., Laurens—Garage.—Laurens Motor Car Co. purchased site 56x113 ft., improved with 2 bldgs.; will remodel one structure as motor car sample-room and erect garage in rear.

Tenn., Chattanooga—Automobiles.—Hamilton Motor Car Co., capital stock \$10,000, incorporated by A. R. Pryor, L. T. Prigmore, H. C. Kelley and others.

Tenn., Memphis—Garage.—Lockwood & Co., 306 Madison Ave., let contract Jas. E. Failes to build garage; 1 story; mill construction; brick walls; concrete foundation; composition roof; cost about \$10,000; site 110x320 ft.; plans by Hubert D. McGee. (Lately noted.)

Tex., Kingsville—Automobiles.—Kingsville Auto & Electric Co., capital stock \$2000, incorporated by C. H. Flato, Jr., J. D. Finnegan and E. W. House.

Va., Richmond—Automobile Supplies.—Imperial Auto Supply Co., 527 W. Broad St., capital stock \$10,000, incept. by Carter W. Sampson, Pres.; Treas.; H. A. Grant, V. P., Secy. and Mgr.; automobiles and supplies.

RAILWAY SHOPS, TERMINALS, ROUNDHOUSES, ETC.

Tenn., Nonconhah—R. P. O. at Memphis.—Illinois Central R. R., A. S. Baldwin, Ch. Engr., Chicago, Ill., is reported to build car-repair sheds at Nonconhah terminals to cost about \$300,000.

ROAD AND STREET WORK

Ala., Selma.—Dallas county will grade, grub, gravel and drain Blalock and Uniontown Rd., about 3½ mi.; also grade, grub, gravel and drain Barkers Mill Rd., about 10 mi.; Board of Revenue receives bids until June 21; P. H. Pitts, Probate Judge. (See Machinery Wanted.)

Ark., Conway.—Comms. Street Improve-

ment Dist. No. 3 let contract I. P. Shelby of Little Rock and P. F. Connell of El Reno, Okla., to pave West Oak, Caldwell and Center Sts.; 900 yds.; concrete.

Fla., Bartow.—Polk county will construct five ¼-mi. sections sand-asphalt road; Polk County Comms. receive bids until May 28; J. A. Johnson, Clerk. (See Machinery Wanted.)

Fla., Orlando.—Orange County Comms. will construct 2½ mi. sand-oil road.

Fla., Orlando.—Orange county road construction progressing; 15 per cent. completed; entire work estimated for completion by December 1; 57 mi. brick roads 9 ft. wide; partly wire-cut lug brick grouted, balance with sand filler; cost \$317,000; contractors include Southern Clay Mfg. Co., Chattanooga, Tenn.; R. M. Hudson, Atlanta, Ga., and Alabama Paving Co., Birmingham, Ala.; Engr., G. R. Ramsey, Orlando; B. M. Robinson, Clerk Circuit Court. (Construction previously noted and described.)

Fla., Palatka.—Putnam county contemplates voting on organization of special road and bridge district and expenditure of \$125,000 for road construction. Address County Comms.

Fla., Tarpon Springs.—City let contract J. B. McCrary Co. of Atlanta, Ga., for about 1000 ft. vitrified-brick paving in Athens St. from Cedar St. to banks of Anclote River.

Fla., Titusville.—Brevard county votes June 15 on \$150,000 bonds to construct roads and bridges. Address County Comms.

Ga., McCaysville, P. O. at Epworth.—Town let contract to construct 2 mi. concrete sidewalks. Address Town Clerk.

Ky., Georgetown.—City let contract Merrill Construction Co., Chattanooga, Tenn., to pave Main St. with asphalt.

Ky., Hickman.—Fulton county recalled election on road bonds; probably not call for another within 4 months; E. J. Slater, County Judge. (Previously noted to vote May 22 on \$300,000 bonds to construct 212 mi. graded roads.)

Ky., Louisa.—Lawrence county defeated \$100,000 bonds to construct roads; R. A. Stone, Sheriff. (Lately noted.)

Ky., Louisville.—City will pave alley from Hancock to Clay St., alley from Bellewood to Moss Rose Ave., etc.; letting No. 585; Board of Public Works receives bids until June 2. (See Machinery Wanted.)

Ky., Maysville.—Mason county defeated \$300,000 bonds to construct roads. (Lately noted.)

Ky., Morehead.—Rowan county contemplates voting in November on \$100,000 bonds to construct roads. Address County Commissioners.

Ky., Monticello.—Wayne county will vote, probably in July, on bond issue to construct roads. Address County Comms.

Ky., New Castle.—Henry County Fiscal Court let contract Phelps-Post-Guyn Co. of Lexington at about \$15,000 to construct macadam road from New Castle to Eminence under State-aid plan. (Lately noted.)

Ky., Pineville.—Bell county will improve road between Middlesboro and Four Mile; 20 mi.; estimated cost \$70,000; Fiscal Court receives bids until June 5; W. C. Bingham, County Clerk. (See Machinery Wanted.)

Ky., Tompkinsville.—Monroe county recalled bond election for road construction previously noted to be held May 15.

Ky., Whitley City.—McCrery county votes July 10 on \$100,000 bonds to construct roads. Address County Comms.

La., Franklin.—St. Mary parish let contract Perry & Bonner to construct 50 mi. road from Morgan City to parish line near Jeanerette; about \$240,000 available; Walter Y. Kemper, Franklin, and Warren B. Reed, Morgan City, are Consult. Engrs. (Call for bids lately noted.)

La., Natchitoches.—Natchitoches parish voted \$40,000 bonds to construct roads. Address Police Jury.

Mo., Baltimore.—City will pave Lombard St. from Exeter to Washington, and Washington St. from Aliceanna to Fayette; contract No. 118; 24,400 sq. yds. sheet asphalt, 2050 sq. yds. vitrified brick and 2050 sq. yds. granite block paving; bids until June 2; R. Keith Compton, Chrmn. Paving Com. and Consult. Engr. (See Machinery Wanted.)

Mo., Princess Anne.—Maryland State Roads Com., O. E. Weller, Chrmn., 601 Garrett Bldg., Baltimore, will construct one section State highway, about 4.40 mi., from Marion to Hopewell, Somerset county; concrete; contract No. S-8; bids until June 15. (See Machinery Wanted.)

Mo., Towson.—Baltimore county will improve following avenues and roads: Beau-

mont Ave., 9th Dist., concrete roadway, ½ mi.; Grindon lane, 9th Dist., ½ mi.; Hollins Ferry Rd., 13th Dist., 1 mi.; Clarendon Ave., 1st Dist., ½ mi.; Sparrows Point Rd., 15th Dist., 1 mi.; Wise Ave., 15th Dist., ½ mi.; all to have concrete roadway; grade Maiden Choice Rd., 1st Dist.; County Comms. receive bids until May 27; W. G. Suero, Roads Engr.; C. J. Fox, Ch. Clerk. (See Machinery Wanted.)

Mo., Kansas City.—City let contract Wm. Harte at \$5169 to construct concrete pavement on 3d St. from Broadway to Wyandotte Ave.

N. C., Dobson.—Surry County, Long Hill Township, votes June 5 on \$10,000 bonds to construct roads. J. B. Sparger, Chrmn. County Comms.

N. C., Dobson.—Surry County, Dobson Township, votes June 8 on \$30,000 bonds to construct roads; J. B. Sparger, Chrmn. County Comms.

N. C., Lexington.—Davidson County Road Com., L. V. Phillips, Varner Bldg., Secy., will expend previously-noted \$300,000 in grading, draining and surfacing with gravel and top soil; construct roads both by contract and by county forces; the main roads—National and Central highways—to be 30 ft.; others, slightly narrower; all to be surfaced to width of 16 ft.; probable cost per mile, not including bridges, about \$1500; no large bridges; perhaps a number of I-beam spans; will use shale pipe, metal pipe and concrete for culverts; R. T. Brown, Engr., Lexington. (Additional details previously noted.)

N. C., Raleigh.—Wake County, Middle Creek Township, is reported to have voted \$50,000 bonds to construct roads. Address County Commissioners.

N. C., Southport.—Brunswick county, Town Creek township, will construct 7 mi. sand-clay road; Road Comms., Dr. E. G. Goodman, Chrmn., Bolivia, N. C., receive bids until June 9; W. H. Bank, Engr., Wilmington, N. C. (See Machinery Wanted.)

N. C., Wilson.—City votes July 6 on \$250,000 bonds to grade and pave streets, etc. Address The Mayor. (See Water-works.)

N. C., Winston-Salem.—Forsyth county will construct 4½ mi. Germantown Rd.; grading and soiling; Highway Com., Jas. A. Gray, Jr., Chrmn., invites bids until May 27; further road construction later; T. W. Harmon, Engr.

Okla., McAlester.—City, J. I. Wood, Mayor, will construct grading, curbing and guttering in Street Improvement Dist. No. 19; about 2500 cu. yds. excavation, 7500 sq. yds. paving, 4000 lin. ft. curb; bids June 2; J. M. Gannaway, City Clerk. (See Machinery Wanted.)

S. C., Charleston.—City Council let contracts for 1915 paving, comprising 65,000 sq. yds., of which 20,000 to 25,000 sq. yds. are creosoted wooden blocks and remainder sheet asphalt and asphaltic concrete, as follows: Simons-Mayrant Co. of Charleston for wooden block paving, and Louis Lawson of Norfolk, Va., for sheet asphalt and asphaltic concrete; all on concrete base; J. H. Dingle, City Engr. (Call for bids lately noted.)

S. C., Chester.—City will vote on \$100,000 bonds to improve streets and sidewalks. Address The Mayor.

N. C., Southport.—Brunswick county, Northwest township, engaged W. H. Bank, Wilmington, N. C., as engineer for 8 to 10 mi. sand-clay road to be constructed from Brunswick Bridge to Columbus county line via Phoenix; invite bids about June 1.

Tenn., Bristol.—City will issue \$10,000 bonds for street improvements. Address The Mayor.

Tenn., Knoxville.—City, John W. Flenniken, Commr. of Streets, will pave, grade and curb in Improvement Dist. Nos. 103, 105, 107, 108 and 109; about 35,000 sq. yds. paving, 15,000 cu. yds. grading, 10,000 lin. ft. storm sewer, etc.; bids until June 4; J. B. McCalla, City Engr. (See Machinery Wanted.)

Tenn., Manchester.—Legislature appropriated \$3000 to complete road from Tullahoma to Oroca, 3½ mi.; boulevard graded. Address County Comms.

Tenn., Morristown.—Hamblen county voted \$150,000 bonds to construct roads. Address County Comms. (Lately noted.)

Tenn., Park, R. Station, Knoxville.—City let contract Dan M. Carey to grade streets.

Tex., Boerne.—Kendall county has \$5,000 available for building and maintaining roads in Dist. No. 1; has not set date of opening bids; C. H. Schrader, Commr. (Previously noted.)

Tex., Cuero.—De Witt County, Road Dist. No. 4, votes June 24 on \$57,000 bonds to con-

struct 29 mi. roads radiating from Cuero. (Lately noted.)

Tex., Floresville.—Wilson County Comms. let contract N. A. Dawson of Austin at \$27,000 to construct roads.

Tex., Fort Worth.—Tarrant county will construct section of Mansfield Rd. near Sycamore Creek; J. A. Mulholland, County Auditor, receives bids until May 24; Jesse M. Brown, County Judge. (See Machinery Wanted.)

Tex., Hallettsville.—Lavaca county, Shiner Justice's Court Precinct, votes June 29 on \$150,000 bonds to improve roads. Address County Comms.

Tex., Oakville.—Live Oak county will construct roads in Road Dist. No. 4, to cost \$40,000; invites bids until June 16; J. H. Casey, Commr., Whitsett, Tex.; W. W. Caves, County Judge; lately noted to have voted \$40,000 bonds. (See Machinery Wanted.)

Tex., Orange.—Orange County, Precinct No. 3, votes June 19 on \$25,000 bonds to gravel or shell portion of Mansfield Ferry Rd. Address County Comms.

Tex., Port Lavaca.—City voted \$17,000 bonds to macadamize, gravel or shell streets. H. C. Innis, Mayor. (Lately noted.)

Tex., Port Lavaca.—City voted \$17,000 bonds to drain and gravel or shell streets; open bids about June 15; H. E. McGee, Engr.; F. L. Young, official in charge. (See Machinery Wanted.)

Tex., Palmer.—City let contract J. W. Jarrett of Waxahatchie to construct 1 mi. concrete sidewalks.

Tex., Richards.—J. G. Browne Co., Houston, Tex., received contract to construct gravel roads to cost \$50,000.

Va., Houston.—Halifax County, Red Bank Magisterial Dist., defeated \$50,000 road bonds lately noted voted.

W. Va., Charleston.—Kanawha County Commissioners will construct quarter mi. road in Cabin Creek Dist.; estimated cost \$5000.

W. Va., Princeton.—Mercer county voted \$350,000 bonds to construct roads; Geo. H. Hill, Engr.; W. J. Lilly, Athens, and B. B. Hunt, New Hope, officials in charge. (Lately noted.)

SEWER CONSTRUCTION

Ala., Northport.—City, Dr. C. P. Bell, Mayor, will construct previously-noted sewer system; 3000 ft. 10-in. and 3700 ft. 8-in. terra-cotta pipe, etc.; voted \$3000 bonds; bids until June 1; Edgar B. Kay, Engr., Tuscaloosa, Ala. (See Water-works and Machinery Wanted.)

Ark., Siloam Springs.—City let contract Everett & Burt of Hutchinson, Kans., to construct sanitary-sewer system costing about \$40,000; includes disposal plant; Engrs., Winters & Dove, 311 Merchants' National Bank Bldg., Fort Smith, Ark. (Call for bids lately noted.)

Fla., Greenville.—City will install sewer system; Fred A. Bishop, Engr. (See Electric Plants.)

Ky., Lexington.—S. T. Crecelius, C. E., Louisville, is conferring with city officials relative to making preliminary survey for disposal field for sewage.

La., Hammond.—City will construct lately-noted sewer system and sewage-disposal plant to cost about \$50,000; voted \$40,000 bonds; Xavier A. Kramer, Engr., Magnolia, Miss.

Mo., Baltimore.—City will construct lateral sewers and house connections in Dist. No. 24-A, Sanitary Contract No. 155; 3900 lin. ft. 27-in. sewer, 21,000 lin. ft. 8-in. to 15-in. sewer, 15,500 lin. ft. house connections; bids until June 2; Chas. England, Chrmn. Sewerage Com. (See Machinery Wanted.)

Mo., Maplewood.—City will construct about 5000 lin. ft. 7-ft. tunnel public sewer to cost about \$50,000; M. F. O'Brien, City Clerk, invites bids until June 9.

N. C., Durham.—City let contract J. J. Jacobs of Durham at \$2,875.49 to construct sewer outfall; 1900 ft. 8-in. and 6000 ft. 12-in. sewer; W. G. Bradshaw, Chrmn. Comm.; let contract Chattanooga Sewer Pipe Co. of Chattanooga, Tenn., at \$1253.30 to furnish pipe and pipe joints.

N. C., Warrenton.—City voted \$50,000 bonds for sewer system and water-works. Address The Mayor. (Lately noted.)

Okla., Beggs.—City defeated lately-noted bonds for sewer construction.

S. C., Walterboro.—City let contracts to construct sewer, water and electric-light systems; contracts include: Dysard Construction Co. of Atlanta, Ga., at \$13,600 to lay 6 mi. pipe sewers 8 to 15 in. diam., with man-holes, flushtanks, etc.; H. S. Jaudon Engi-

neering Co., Engr., Box 582, Savannah, Ga.; H. W. Black, Jr., Chrmn. Comms. (Call for bids lately noted.)

Tenn., Nashville.—City will construct clay pipe sewers in alleys No. 655 and 652 and alley west of 12th Ave.; also extend Belmont Blvd. trunk sewer; Board of Comms. receive bids until May 25; H. E. Howse, Mayor. (See Machinery Wanted.)

Tex., Anderson.—Grimes County Comms. let contract J. G. Browne Co., Houston, Tex., to construct sewer system, including piping, septic tank, filter-bed and plumbing fixtures for county courthouse.

Tex., Big Spring.—City will grant franchise for sewer system. Jas. T. Brooks, Mayor. (See Machinery Wanted.)

Tex., Galveston.—City will construct 800 lin. ft. 8-in. vitrified-pipe sewer, 400 lin. ft. 15-in. vitrified-pipe drain, and 400 lin. ft. 1-ft. 8-in. by 4-ft. 6-in. concrete drains in alleys between Aves. C and E from 28th to 29th St.; City Comms. receive bids until June 3; A. T. Dickey, City Engr.; John D. Kelley, City Secy. (See Machinery Wanted.)

Tex., Houston Heights.—City let contract Horton & Horton of Houston at \$26,222 to construct storm-sewer system; 1400 ft. 84-in. and 600 ft. 36-in. sewer, with inlets, catch-basins, etc.; Engrs., Howe & Wise, 722 First National Bank Bldg., Houston; J. B. Marmion, Mayor. (Call for bids lately noted.)

Va., Richmond.—Administrative Board let contract McAnughey & Van Doren at \$65,000 to construct section of Bacon Quarter Branch sewer; also to A. W. Maynard at \$4000 to construct sewer on Bainbridge St. from 14th St. to Cowardin Ave., South Richmond.

W. Va., Keyser.—City is having plans made by Leander Schaldt, Citizens' Bank Bldg., Cumberland, Md., for about 4000 ft. intercepting or trunk sewer. (See Water-works.)

TELEPHONE SYSTEMS

Ark., Womble.—Town Council granted franchise to Western Telephone Co. for telephone system and exchange; operate about 75 telephones.

Ky., Grassy Creek.—Index & Hazel Green Telephone Co. Incptd. by E. W. Day, J. L. Stamper, G. L. Rose and others.

Miss., Vicksburg.—Cumberland Telephone & Telegraph Co. (main office, Louisville, Ky.) is having plans prepared by P. Thornton Marye, Candler Bldg., Atlanta, Ga., for exchange; 3 stories; ground area 3400 sq. ft.; brick; terra-cotta trimmings; fireproof construction; composition roof; steam heat.

Tenn., Belfast.—Belfast Telephone Co., J. W. Wakefield, Mgr., will operate 1 to 10 mi. lines; all contracts closed; capital stock \$2500. (Lately noted organized.)

Tenn., Knoxville.—Beaver Ridge Telephone Co., capital stock \$3000, Incptd. by W. L. Roberts, H. H. Hendricks, John May and others.

Tenn., Millington.—Millington Telephone Co., capital stock \$10,000, Incptd. by E. Woods, W. H. Bass, T. J. Clampt and others.

TEXTILE MILLS

Ala., Piedmont.—Cotton Yarn.—Coosa Mfg. Co. will build 118x106-ft. brick-construction extension, costing \$16,000, to No. 2 mill; has opened building bids; will install 10,000 spinning spindles, 5000 twistlers, etc., costing \$50,000, electric group drive and 4 frame drives costing \$18,000, etc.; all machinery arranged for; J. E. Sirrine, Engr.-Archit., Greenville, S. C. (Lately noted to build addition, etc.)

Ga., Atlanta.—Cotton Goods.—Exposition Cotton Mills will erect 2-story brick building reported to cost \$11,000; let contract to Griffin Construction Co., Atlanta.

Ga., Forsyth.—Cotton Yarn.—Ensign Cotton Mills will build 145x75-ft. addition; 2 stories and basement; brick mill construction; building contract not let; install 30 cards and 6000 spindles, etc.; machinery contracts not closed; Lockwood, Greene & Co., Archts., Boston, Mass., and Atlanta, Ga. (In March noted to build addition and double spinning capacity.)

Ga., Dalton.—Cotton Cloth.—Crown Cotton Mills will build 2-story standard brick mill construction addition 160x125 ft. and 250x110 ft. weave shed; also cottages, warehouses, etc.; add 15,000 spindles, with complement of looms and preparatory machinery; plans not completed.

N. C., Concord.—Cotton Products.—F. J. Haywood, Secy., and W. B. Broadfoot, Supt. of Brown Mfg. Co., plan organization \$100,000 company to build cotton mill; C. W. Johnston, Charlotte, N. C., Prest. of Brown Mfg. Co., to be Prest.

N. C., Draper.—Cotton Cloth.—Thread Mills

Co., Spray, N. C., plans to build wide sheeting mill of 1000 looms. (See N. C., Spray.)

N. C., Spray.—Cotton Cloth.—Thread Mills Co. plans expending \$500,000 for additional buildings, machinery, etc.; not now prepared to state complete details; immediate development to include bleachery, electric plant of 3000 H. P., fine-art mill of 400 to 600 box looms, each at Spray, and wide sheeting mill of 1000 looms at Draper; previously reported as to build central power station for its various mills; understood this station is the electric plant now mentioned; F. P. Sheldon & Son, Providence, R. I., Archts.-Engrs. for power plant.

N. C., Stanley.—Cotton Yarn.—W. A. Mauney, Prest. of Long Shoals Cotton Mills, Long Shoals, N. C., and others purchased Mariposa Mill; will add new machinery, etc.; has 3264 ring spindles, 1684 twistler spindles, water-power equipment, etc.

WATER-POWER DEVELOPMENTS

Ala., Birmingham.—Commr. A. O. Lane will recommend to City Com. that Julian Hendrick, City Engr., be instructed to make preliminary survey and report upon feasibility of constructing municipal power plant at Lock 17 of Warrior River.

Ga., Thomaston.—Central Georgia Power Co., S. W. Hatfield, purchasing agent, Macon, Ga., advises that material has been purchased for about 16-mi. pole transmission line extension to Thomaston from Barnesville, Ga. (Lately noted.)

Mo., Linn Creek.—Big Niangua Hydro-Electric Co., Thos. S. Ridge, Gen. Mgr., 333 Ridge Bldg., Kansas City, Mo.; will build hydro-electric plant when financial arrangements are completed; develop water-power on Big Niangua River, 6 mi. southwest of Linn Creek; total estimated cost \$2,500,000; dam to be of concrete-steel construction, 1500 ft. long by 160 ft. high; dam and power-house to cost \$1,500,000; 30,000 H. P.; 120 mi. transmission system to cost \$1,000,000; transmit electricity to Kansas City, Independence, Lee's Summit, Pleasant Hill, Warrensburg, Sedalia, Tipton and Versailles. (Previously reported organized, etc., Roland E. Bruner, Kansas City, being principal organizer.)

WATER-WORKS

Ala., Dadeville.—City voted \$16,000 bonds for water-works. Address The Mayor. (Previously noted.)

Ala., Northport.—City, Dr. C. P. Bell, Mayor, will construct water-works previously noted; voted \$13,000 bonds; install 80,000-gal. steel or concrete pressure tower and tank, 80,000-gal. receiving tank, 500-gal. pump, fire hydrants, 3800 ft. 8-in. and 4900 ft. 6-in. cast-iron pipe, etc., and pump-house; bids until June 1; Edgar B. Kay, Engr., Tuscaloosa, Ala. (See Machinery Wanted.)

Fla., Greenville.—City will install water-works; Fred A. Bishop, Engr. (See Electric Plants.)

Ky., Tompkinsville.—L. W. Preston of Glasgow, Ky., and others are considering construction of water-works. (See Electric Plants.)

La., Whitecastle.—City will install previously-noted water-works and electric-light plant; cost \$25,000; Xavier A. Kramer, Engr., Magnolia, Miss.

Mo., Kirksville.—City votes June 24 on \$70,000 bonds to complete rebuilding water-works and to build and equip electric-light plant. Address The Mayor.

Mo., Rockport.—City will construct water-works to cost \$12,000; City Clerk invites bids until about June 10; Engrs., W. B. Rollins & Co., Midland Bldg., Kansas City.

N. C., Durham.—City let following contracts to construct water-works: Christian Construction Co., Durham, at \$32,977, for constructing a river station, city station and filter-house; Chapman Valve Mfg. Co., Indian Orchard, Mass., \$3994, for gate valves; Allis-Chalmers Co., Milwaukee, Wis., at \$18,000, for pumping engines; De Laval Steam Turbine Co., Trenton, N. J., at \$11,200, for pumps; D. M. Dillon Steam Boiler Works Co., at \$7087, for boilers; Engr., Gilbert C. White of Charlotte; W. J. Brogren, Mayor. (Call for bids lately noted.)

N. C., Wilson.—City votes July 6 on \$250,000 bonds to reconstruct water-works, build gas plant and grade and pave streets. Address The Mayor. (Noted in Feb.)

Okla., Oilton, P. O. at Jennings.—Eaton & Dunn (lately noted as controlling franchise) will construct water-works for 3000 to 5000 population; cost not decided; construction includes standpipe and wells; machinery prices asked. (See Machinery Wanted.)

N. C., Warrenton.—City voted \$50,000 bonds for water-works and sewer system. Address The Mayor. (Lately noted.)

N. C., Wilmington.—Oakdale Cemetery Co. let contract A. D. O'Brien of Wilmington to construct water-works; 2200 ft. 4-in. pipe; 2000 ft. 2 to 3-in. pipe; 12,500 ft. 3/4-in. pipe; hydrants, valves, etc.; J. L. Becton, Engr., Odd Fellows' Bldg., Wilmington; Walker Taylor, Chrmn. Water-works Com. (Call for bids lately noted.)

Okla., Boswell.—City let contracts for water-works to Pittsburg-Des Moines Steel Co. of Pittsburgh, Pa., and Des Moines, Iowa, at \$3572, for 100,000-gal. tank; Sullivan Machinery Co., Chicago, compressor and air pumps, \$840; American Cast Iron Pipe Co., Birmingham, Ala., pipe at \$843.14; Crane & Co., Muskogee, Okla., pipe, fittings, etc., \$1664.51; Ludlow Valve Mfg. Co., Troy, N. Y., valves and hydrants, \$1179.90; total contracts let \$15,709.55; J. T. George, City Engr. (Bids lately noted.)

S. C., Walterboro.—City let contracts to construct water, sewer and electric-light systems; contracts include: Dysard Construction Co. of Atlanta, Ga., at \$10,435 to lay about 3 mi. 8 and 6-in. cast-iron water mains, and R. T. Aderhold of College Park, Ga., at \$1250 to construct 150,000-gal. concrete reservoir with concrete cover, and at \$2380 to erect brick electric and pumping plant building; award of contract for electric generator, tower and tank and artesian well drilling postponed; H. S. Jaudon Engineering Co., Engr., Box 582, Savannah, Ga.; H. W. Black, Jr., Chrmn. Board Comms. (Call for bids lately noted.)

Tex., Beaumont.—City let contract Lake Arthur Dredging Co., Lake Arthur, La., at \$21,775.25 to extend water-works canal; Engineers, Burns & McDonnell, 821-826 Scarritt Bldg., Kansas City, Mo.; Emmett A. Fletcher, Mayor. (Call for bids lately noted.)

Tex., Fort Worth.—J. D. Trammell, Chrmn. Board of Reservoir Engrs., estimates cost of raising of earthwork of Lake Worth dam 3 ft. at \$9000; earthen dam is 2700 ft. long; main section is 39 ft. wide on top, short section is 20 ft. wide, and section north of spillway is 51 ft. wide.

Tex., Temple.—City, J. T. Martin, Secy., has plans and specifications on file with City Engr. for construction of dam across Leon River in connection with water-works system; as lately stated, bids until June 8. (See Machinery Wanted.)

Tex., Dallas.—Southern Methodist University will expend \$35,000 to improve water supply; drill well, etc.

Tex., Fort Sam Houston.—Quartermaster Dept. plans construction of water distributing system to include pump-house and water tank. (See Government and State, under Buildings Proposed.)

Va., Petersburg.—City, J. E. Harvell, Chrmn. Water Com., let contract to Pittsburg-Des Moines Steel Co., Pittsburgh, Pa., at \$4475 for 2 60,000-gal. water tanks; R. D. Budd, Engr. (Tanks lately noted.)

Va., Richmond.—Cucharus Land & Water Corp., capital stock \$125,000, chartered; Ernest B. Flippen, Prest.; W. G. L. McGuire, V-P.; Andrew D. Christian, Secy.-Treas.

W. Va., Keyser.—City contemplates voting on bonds for water-works. Address The Mayor.

W. Va., Keyser.—City contemplates voting on bonds for water-works; surveys and plans being made by Leander Schaldt, Citizens' Bank Bldg., Cumberland, Md., who is also preparing plans for about 4000 ft. sewer.

W. Va., Ravenswood.—City let contract H. C. Brooks Co. of Martinsburg at \$11,750 to construct water-works; Engr., J. V. Dunbar; Ira S. Bartlett, Mayor. (Lately noted.)

WOODWORKING PLANTS

Ala., Hartsboro.—Buggles, Furniture, etc.—Hartsboro Machine Shop, E. Renfro, Prest., will manufacture buggles, wagons and furniture; purchased oil engine, woodworking and carriage-building machinery. (See Flour, Feed and Meal Mills.)

Ark., Bentonville.—Cooperage.—E. T. Peck Cooperage Co. will install cooperage plant to manufacture tight and slack barrels.

Fla., Apalachicola.—Box Shooks.—Jackson River Lumber Co. will install equipment to manufacture box shooks; ordered machinery.

Mo., St. Louis.—Boxes, etc.—St. Louis Basket & Box Co. will erect factory, warehouse and office building; 137x170 ft.; fireproof; floors, columns and girders of reinforced concrete; exterior walls of brick; first floor to contain machinery and storage-rooms; offices on second floor; estimated cost, \$125,000.

N. C., Biltmore.—Boxes.—A. G. Betts & Co. leased former Biltmore box factory; reported as planning to expend \$15,000 for

equipment to include band sawmill and planing mill.

Va., Galax.—Chairs.—Edwards Chair Co., capital \$25,000, Incptd. A. M. Edwards, Prest.; J. N. Edwards, Secy.

FIRE DAMAGE

Ala., Albertville.—Albertville Trading Co.'s store was not burned, as lately reported.

Ala., Anniston.—Seven dwellings owned by Wm. Muscott; dwelling owned by Dr. E. C. Anderson; loss \$5000.

Ala., Flint.—Poole & Co.'s store; loss \$5000.

Ala., Russellville.—W. S. Douglass' store; T. E. Leftwich's building; Russellville Hotel; loss about \$20,000.

Ala., Tallahassee.—Bank of Tallahassee, loss \$26,000; Ward, Land & Skaggs' building, loss \$8000; W. A. Baker's store, loss \$7000; C. E. Bilibrey's store, loss \$3000; Woodall Bros' store, loss \$10,000; Garrett Dry Goods Co.'s store; Sistrunk Bldg., loss \$3000. (Lately noted in part.)

Ala., Troy.—Troy Hotel; loss \$5000.

Ark., Camden.—Cotton compress owned by M. A. Joy of Terrell, Tex.; loss \$30,000.

Ark., Lewisville.—Beatty & Coleman's store; A. M. Shirey's store.

Ark., Little Rock.—Rieff & Co.'s planing mill at 16th and High Sts.; estimated loss on building \$4000 and machinery \$5000.

Ark., Rosboro.—Rosboro Lumber Co.'s electric-power plant; loss \$150,000.

Fla., Gulfport.—J. Lee Hanks' dwelling; loss \$7000.

Ga., Ocella.—Planters' Warehouse Co.'s warehouse; loss \$20,000.

Ky., Glasgow.—W. C. Moss' building; Blau Read's meat market; Louis Fisher's building; Thomas & Thomas' repair shop; Emmett Williams' blacksmith shop; Church of Christ (J. W. Grant, pastor, Nashville).

Ky., Louisville.—Mrs. Lucille Major's residence, 2709 S. 7th St.; Wm. Heeke's residence, 2711 S. 7th St.; loss \$6500.

Ky., Louisville.—Kemp & Kopp's wagon and automobile paint shop at 432-434 S. 11th St.; loss \$17,500.

Ky., Winchester.—Buildings owned by T. L. Numan, J. W. Porter and Gambill & Gambill; loss \$20,000.

La., Alexandria.—Rev. W. Lennie-Smith's barn, dairy and milkroom and garage.

La., Baton Rouge.—Louisiana State Live-stock & Sanitary Board's hog cholera serum plant.

La., Gretna.—David Schwarz's residence; Mrs. Emma Heilbach's residence and cottage; Chas. Delger's cottage.

Md., Denton.—Thos. R. Green and Leslie Merrick's ice plant and ice-cream factory, estimated loss \$8000; Hughes & Cole Lumber Co.'s railroad station and lumber yards.

Md., Uniontown.—Wm. Mowers' bank barn, wagon shed, corner and other outbuildings; loss \$3500.

Miss., McComb City.—Chas. Gilmore's residence.

Miss., Ripley.—J. N. Street's residence; Baptist church on Main St. Address The Pastor.

Miss., Vicksburg.—Building owned by B'nai B'rith Society; loss \$50,000.

N. C., Durham.—Morhead Grade School; loss \$35,000. Address City School Supt. Pusey.

N. C., Charlotte.—E. V. Finlayson Mfg. Co.'s trousers factory at 211-217 W. 4th St.; loss \$15,000 to \$20,000.

N. C., Henderson.—Grand Opera-house, J. S. Poythess, owner; loss \$20,000.

Okla., Broken Bow.—Boyd & Robinson's store; loss \$10,000 to \$15,000.

S. C., Anderson.—John Pruitt's residence, 8 mi. south of Anderson; loss \$10,000.

S. C., Belvedere, R. F. D. from North Augusta.—Dorr's cigar factory; main office, Augusta, Ga.

Tenn., Alamo.—Reams Dry Goods Co.'s store, building owned by Durham-Conley & Co.; Bank of Alamo; loss \$10,000.

Tenn., Mason.—Dr. J. J. Eclam's residence.

Tenn., St. Elmo.—J. C. Hale's residence at Tennessee and Florida Aves.

Tex., Bryan.—G. D. Tucker's livery barn; loss \$10,000.

Tex., Cleveland.—Central Hotel; Old Sycamore Hotel; W. H. Phillips' building; Llew' Barber Shop; L. A. Isaac's dry goods store; Ballard's Restaurant; Cleveland Pharmacy; loss \$50,000.

Tex., El Paso.—W. C. Lea's residence at 3314 Grand Ave.; loss \$3000.

Tex., Ennis.—Dr. Bell P. Lowry's residence; loss \$3000.

Tex., Oakville.—Waller Hotel, owned by Mrs. Lydia Moore.

Tex., Primm.—Willie Primm's farmhouse; loss \$3000.

Tex., San Benito.—Reynolds Gin Co.'s plant, estimated loss \$12,000; Bludwine Bottling Co.'s plant, loss \$3000.

Tex., Seguin.—W. C. Thomas' residence; loss \$4000.

Tex., Sweetwater.—D. I. Herndon Shoe Co.'s store; Commercial Cafe; J. W. Hall's rooming-house; loss \$10,000.

Tex., Sweetwater.—Sullivan Bldg., owned by Mrs. Susan Sullivan, Shreveport, La.

Tex., Yoakum.—Eugene Humphreys' residence on Duke St.

Va., Norfolk.—Victoria Hotel, owned by Andrews estate, loss \$9000; Majestic Theater, loss \$6000.

cost about \$150,000; other details not determined. (Lately noted.)

Tex., Dalhart.—First National Bank, W. N. Stone, Pres., will erect building; 1 story; red pressed brick; 25x140 ft.; rear portion for offices.

Tex., Galveston.—Capt. W. D. Haden will convert building into store and office building. (See Stores.)

W. Va., Parkersburg.—Walker & Hiteshaw open bids about June 15 to erect office, store and lodge building. (See Stores.)

BUILDING NEWS

BUILDINGS PROPOSED

APARTMENT-HOUSES

Ga., Atlanta.—Atlanta School of Medicine has plans by C. E. Frazier, Atlanta, to convert former medical school building at Luckie and Barrow Sts. into apartment-house; cost about \$15,000.

Ga., Macon.—T. C. Burke will erect 2-apartment building; galvanized-iron shingle roofing; cost \$4000; Hupp & Shelverton, Archts., Macon.

Ga., Macon.—Happ Realty Co. will erect 2-apartment building; stucco; galvanized-iron shingle roofing; cost \$4000; Hupp & Shelverton, Archts., Macon.

Ky., Louisville.—Jas. H. Button is having tentative plans prepared by Brinton B. Davis, Louisville, for apartment-house at 4th St. and Park Ave.

Mo., Kansas City.—C. O. Jones plans to erect block of flats at 8th St. and the Paseo.

Mo., St. Louis.—Aug. Wild will erect 2-story tenement-house at 4661 Tennessee St.; cost \$3000; construction by owner.

Mo., St. Louis.—H. Molitor will erect 2-story tenement-house at 4400 Oregon St.; cost \$3000; construction by owner.

Mo., St. Louis.—H. Monti will erect 2-story tenement-house at 1294 Amherst St.; cost \$7000; construction by owner.

Mo., St. Louis.—Samoto Realty & Building Co. has plans by Nolte & Nauman, Fullerton Bldg., St. Louis, for 2 flats at Allen and Mississippi Aves.; one 40x50 ft., cost \$7500; other 80x50 ft., cost \$12,000; ordinary construction; tile and tar and gravel roof; joint floor; furnace heat; owners will let sub-contracts; construction begun May 25. Address O. L. Rauck, 5578 Etzel Ave., St. Louis.

Mo., St. Louis.—Lewis Realty & Building Co. will erect 2-story tenement-house at 3712-14 N. Euclid St.; cost \$5500; construction by owner.

N. C., Morehead City.—Mrs. W. J. Moore will erect building for apartments and post-office.

Tex., Corsicana.—J. L. Weiler will erect 2-story 20-room flat adjoining residence and brick-vener present structure.

Tex., El Paso.—J. C. Huff will erect apartment-house at Ochoa and Arizona Sts.; cost \$12,000.

Tex., El Paso.—Geo. W. Sharp will erect brick tenement-house in East El Paso addition; cost \$3800.

Va., Norfolk.—Edw. Richardson has plans by Philip B. Moser, 414 Dickson Bldg., Norfolk, for apartment-house on 38th St.; 40x79.6 ft.; ordinary construction; Barrett specification roof; wood floor; tile baths; hot-water heat; cost \$8000; bids opened May 21; construction to begin June 1. Address Archt. (Lately noted.)

Va., Richmond.—O. J. Davis will erect 2 two-story brick tenements on Park Ave. between Addison and Elm Sts.; cost \$11,000.

Va., Richmond.—Claude E. Sprengle will erect 2 stores and flats. (See Dwellings.)

ASSOCIATION AND FRATERNAL

Fla., Palatka.—Masonic Temple Comm., E. E. Haskell, Chmn., is having plans prepared by Edwards & Saywood, 633 Candler Bldg., Atlanta, for temple; 5 stories; fireproof; reinforced concrete floor; electric light; passenger elevator; steam heat; cost \$40,000.

N. C., Wilmington.—Y. W. C. A. has plans by Jas. F. Gause, Jr., Wilmington, for gymnasium; frame; cost about \$3000; bids opened May 22. (Previously noted.)

Tenn., Johnson City.—B. P. O. E. plans to erect \$30,000 lodge building with stores on lower floor; 3 stories; 50x100 ft.

Tenn., Memphis.—Knights of Pythias plan to erect castle hall; stores on lower floor.

Tex., Fort Worth.—Lone Star Camp No. 2, W. O. W., Walter Logan, Chmn. of Com., will erect 7-story building.

Tex., La Pryor.—A. F. & A. M. are not considering erection of building as lately reported.

W. Va., Parkersburg.—Walker & Hiteshaw open bids about June 15 to erect lodge, office and store building. (See Stores.)

BANK AND OFFICE

Ala., Ensley.—Bank of Alabama, temporary location 1711 Avenue E, will erect bank building at 18th St. and Avenue E to replace present structure.

Ark., Newport.—Arkansas Bank & Trust Co. will erect 2-story bank and office building at 1st and Walnut Sts.; 40x134 ft.; water heat; cost \$20,000 without mechanical equipment; Mann & Stern, Archts., Little Rock, Ark.

Ark., Pine Bluff.—Merchants and Planters' Bank acquired building at 105 W. Baroque St. and will remodel.

Fla., Daytona Beach.—V. S. Shelly has plans for store and office building. (See Stores.)

Fla., DeLand.—A. S. Nidor will erect store, office and hall building. (See Stores.)

Fla., Sutherland.—Lewis B. Leach, H. F. Parsons and others will erect bank building for bank being organized.

Ga., Gainesville.—F. P. Jackson will erect office and store building. (See Stores.)

Md., Baltimore.—Horsmeier Lumber Co. has plans by John K. Stack, 12 E. Lexington St., Baltimore, for 1-story and mezzanine office and shed at East Falls Ave. and Stiles St.; brick; cost \$8500; slag roof; wood floors; steam heat, \$250; electric light, \$100; bids opened May 24; address architect.

Md., Baltimore.—Seaboard Bank has plans by Jos. Evans Sperry, 409 Calvert Bldg., Baltimore, to remodel building at Charles and Preston Sts. for bank; will lower floor; remodel interior; erect rear addition; 2 stories; oak interior finish; bidders are John S. Busick, 2811 Raynor Ave.; Milton C. Davis, 15 E. Fayette St.; B. F. Bennett Building Co., 123 S. Howard St.; Chas. L. Stockhausen Co., National Marine Bank Bldg.; Monmonier & Sorrell, 1711 McCulloh St.; Edward Watters & Co., 500 N. Charles St.; J. J. Walsh & Son, 1533 Maryland Ave.; Consolidated Engineering Co., 213 Calvert Bldg.; Edw. Brady & Son, 1113 Cathedral St.; all of Baltimore; bids opened May 27. (Noted in April.)

Mo., St. Louis.—Banier Realty Co. plans to erect office building at Broadway and Locust Sts. for offices of various railroads; 6 stories.

N. C., Henderson.—Farmers & Merchants' Bank will erect building; cost \$15,000.

N. C., Rutherfordton.—Citizens' Bank & Trust Co. is having plans prepared by Hook & Rogers, Charlotte, N. C., for bank building on Main St.

Okla., Beggs.—Farmers' National Bank is having plans prepared by Bert C. Overton, Okmulgee, Okla., for bank building, and will let contract at once to erect; 25x50 ft.; building material to include common brick, mill work, gravel roofing; terrazzo flooring; skylight, plate-glass grilles; electric fixtures, etc.; cost \$4000. (Lately noted.)

Okla., Drumright.—Drumright State Bank will erect bank and office building; 25x35 ft.; 2 stories; cost \$10,000. (Lately noted.)

Okla., Tulsa.—Exchange National Bank plans to erect bank and office building.

Okla., Tulsa.—S. Gallais is having plans prepared by A. W. Black & Son, 522 Security Bldg., St. Louis, for office building at 4th St. and Boston Ave.; 50x140 ft.; 5 or 10 stories; fireproof; steel or reinforced concrete construction; tar and gravel roof; tile floors;

CHURCHES

Ala., Eufaula.—First Methodist Church will erect building; J. P. Foy, Chmn. of Com.

Fla., Larkin.—Primitive Baptist Church will erect building. Address The Pastor.

Fla., Miami.—First Methodist Church rejected all bids to erect building and will receive new bids in about 10 days; probably concrete construction; approximate cost \$40,000; 90x97 ft.; asbestos shingle roof; John Gaisford, Archt., Memphis, Tenn. (Lately noted.)

Ga., Columbus.—First Baptist Church (Colored) will erect building; about 72x96 ft.; ordinary construction; metal roof; wood floors; heating undecided, plans calling for hot air; electric lighting; total cost \$18,000 to \$20,000; F. Ray Duncan, Archt., Columbus; bids opened, but contract not let. Address Jas. A. Luke, 538 4th Ave., Columbus. (Lately noted.)

Ga., Lagrange.—Dunson Mills will erect union church; 42x75 ft.; brick veneer; furnace heat; asphalt shingles; cost \$6000; Chas. W. Carlton, Archt.

La., New Orleans.—St. Theresa's Church, Rev. Father Roth, pastor, will erect rectory.

Md., Baltimore.—Wilton Heights Methodist Protestant Church is having plans prepared by Owens & Sisco, Continental Bldg., Baltimore, for building at Wilton Heights; stone construction.

Miss., Ripley.—Baptist Church will erect building on Main St. to replace structure noted damaged by fire. Address The Pastor.

Mo., St. Louis.—Richard Kerens will erect chapel in Catholic Cathedral at cost of \$75,000; finish in rare marbles, mosaics and gilt bronzes.

N. C., Rosemary.—First Christian Church will erect building; stone, brick and terra-cotta; cost about \$15,000; C. H. Speight, Supt. of Sunday-school.

Okla., Atoka.—J. M. Humphreys, Secy. Bldg. Com., receives bids until June 7 to erect Methodist Episcopal Church South according to plans by J. O. Parr, Security Bldg., Oklahoma City; face brick; composition roof; bids to include building with heating plant, also separate bids for building exclusive of heating plant; plans and specifications on file with said building committee.

Okla., Pooleville.—Baptist congregation plans to erect building. Address The Pastor.

S. C., Charleston.—Cannon Street Baptist Church, Rev. J. E. Bailey, pastor, will erect building at Carolina St. and Rutledge Ave.; will let contract Oct. 1.

S. C., Florence.—Second Baptist Church, Rev. W. B. Oliver, pastor, will erect addition to church.

Tex., Clarendon.—A. N. Julien states he knows of no building to be erected for First Christian Church as lately reported.

Tex., Fort Worth.—First Christian Church is having plans prepared by Van Slyke & Woodruff, Fort Worth, for building at Rosen Heights; 52x84 ft.; brick, stone and wood construction; slag roof; furnace and fan blast heating system; cost \$15,000. (Lately noted.)

Va., Danville.—High Street Baptist Church will install steam-heating plant and metal ceiling, 50x61 ft., in building recently reported burned.

Va., Luray.—Christ Episcopal Church has plans by Mims, Speake & Co., Luray, for building at Amiss St. and Jamison Rd.; 30x70 ft., with tower 16x16 ft.; ordinary construction; slate or tile roof; pine floor; hot-air heat; electric lighting, concealed lights; cost \$5000; bids opened May 19; lately noted. (See Machinery Wanted.)

W. Va., Fairmont.—Presbyterian Church will erect building; details not decided. Address The Pastor.

W. Va., Fairmont.—Central Christian Church receives bids through C. H. Snider, Archt., People's National Bank, Fairmont, until May 31 to erect brick church and parsonage; 45x100 ft.; ordinary construction;

slate roof; wood floor; hot-air heat; electric light; address architect.

W. Va., Huntington.—Guyardotte Methodist Episcopal Church, Rev. R. H. Mills, pastor, is having plans prepared by Verus T. Ritter, Huntington, to remodel building and erect Sunday-school.

CITY AND COUNTY

Ala., Birmingham.—Fire Station.—City will erect fire station at Five Points; cost \$5000. Address City Comm.

Fla., Bradentown.—Home.—Manatee county votes June 22 on \$60,000 bonds, to include \$10,000 to erect buildings and purchase site for county poor farm and \$50,000 to liquidate debt; M. G. Rushton, Chmn. County Commrs.

Fla., Fort Myers.—Fire Station.—City will erect temporary fire station on Anderson Ave.; E. Strickland & Son, Contrs., Fort Myers.

Fla., Gainesville.—Library.—City will erect Carnegie library. Address The Mayor.

Mo., Kansas City.—Police Station.—Board of Public Works approved plans for police station at 19th St. and Baltimore Ave.; brick and concrete; stone trimmings; cost \$20,000. (Lately noted.)

N. C., Carthage.—Home.—Moore County Commrs. receive bids until June 7 to erect county home building; plans and specifications at office of Frank B. Simpson, Archt., Home Bldg., Raleigh, N. C.

N. C., Danbury.—Home.—Stokes County Commrs. will have plans on file at their office on June 7 for consideration of contractors; will appoint later date to receive bids; Humphreys & Faw, Archts., Winston-Salem, N. C.; J. G. Morefield, Clerk of Board. (Lately noted.)

Okla., Tulsa.—Market.—City Commrs. will erect office and market headquarters on Boulder Ave. side of Market Square; 2 stories; brick; cost about \$4500; C. M. Downing, Com. of Public Property; J. W. Hawk, Archt., Tulsa. (Lately noted.)

Tex., Beaumont.—Comfort Station.—City, J. G. Sutton, Secy., will erect comfort building in Magnolia Park; Babin & Beck, Archts., Beaumont; bids opened May 25.

COURTHOUSES

Ky., Lancaster.—Garrard County Judge receives bids until June 2 to erect addition to and alter courthouse; plans and specifications at office of County Judge at Lancaster and Weber, Werner & Adkins, Archts., Cincinnati, O. (Previously noted.)

Ky., Lawrenceburg.—Anderson county is having plans prepared by Joseph & Joseph, Great Southern Bldg., Louisville, for courthouse; 100x90 ft.; fireproof; tile and composition roof; concrete floor; cost \$20,000; bids opened about June 10. (Lately noted.)

Okla., Perry.—Noble county voted \$100,000 bonds to erect courthouse. Address County Commrs. (Lately noted.)

DWELLINGS

Ala., Birmingham.—V. J. Nesbit will erect 2-story brick-vener residence; cost \$4500.

Ala., Mobile.—Mrs. Mary Lightfoot will erect 6-room residence; cost \$6000.

Ark., Little Rock.—J. N. Moxley will erect 2-story frame residence at 2900 Arch St.; cost \$3000.

Ark., Pine Bluff.—Edgar Hogan will erect \$8000 residence; construction begun.

D. C., Washington.—L. E. Breuninger, 3208 19th St., has plans by H. L. Breuninger, same address, for 14 dwellings on Harvard Blvd.; 2 and 3 stories; ordinary construction; slag roof; parquet floor; hot-water heat; cost \$14,000 to \$20,000 each. (Lately noted.)

D. C., Washington.—James Martin, 1801 Kenyon St. N. W., will erect 2-story brick dwelling at 1708 2d St. N. W.; cost \$3500.

D. C., Washington.—E. M. Dulin, 2586 37th St. N. W., will erect 2-story brick residence at 115 Thomas St. N. W.; cost \$3000.

D. C., Washington.—S. Bernstein, 473 Pennsylvania Ave. N. W., will expend \$4000 to remodel dwelling at 489 Pennsylvania Ave. N. W.

D. C., Washington.—Geo. Y. Worthington has plans by John M. Donn, 1516 H St. N. W., Washington, for dwelling on S St. near 20th St.; 3 stories; 30x65 ft.; brick; tin roof; hardwood floor; hot-water heat; electric light; cost about \$10,000; bidders estimating are Samuel H. Edmonston Co., Jas. T. Kenyon Co., Frank Wagner, Chas. A. Langley Co., Upton Smoot Construction Co., Jas. H. Nolan Construction Co., all of Washington; bids due June 1.

D. C., Washington.—A. C. Moses Construction Co., 916 New York Ave. N. W., will develop tract on 28th and 29th Sts. between Woodley Rd. and Cathedral Ave.; erect dwellings; construction to begin at once on 10; 3 stories; 6 to cost \$7500 and 4 to cost \$9500 each; will erect at least 15 additional dwellings in August; Davis Palmer, Archt.; total expenditure, \$200,000. (Lately noted.)

Fla., Plant City.—Sam'l. J. Boone will erect residence in Orange Park.

Fla., Seabreeze.—L. H. Merriday is having plans prepared by D. F. Fuquay, Daytona Beach, Fla., for dwelling on Ocean Beach; brick-veneer; tile roof; hot-water heat; cost \$15,000.

Fla., Tampa.—Deckle Investment Co. will erect residence to cost about \$400.

Fla., Tampa.—C. E. Thomas is erecting residence at S. Delaware and Morrison Aves.; cost \$31,000.

Ga., Atlanta.—E. H. Inman will erect addition to residence at 130 E. 15th St.; cost \$6000; day labor.

Ga., Atlanta.—Mrs. Remie C. Headley is reported to erect bungalows on 14th St.

Ga., Atlanta.—C. L. Sweetman will erect 3 one-story frame dwellings at 235-39 43 E. 14th St.; cost \$4500; day labor.

Ga., Ellijay.—C. B. Kelly will erect bungalow; 1½ stories; brick; acetylene gas lights; slate roof; hardwood floors; cost \$4000; Lella Ross Wilburn, Archt., 305 Peters Bldg., Atlanta.

Ga., Savannah.—City Investment Co. is reported to erect 10 dwellings in Wagner Heights.

Ky., Lexington.—Ben A. Traut will erect brick dwelling at 2537 Cherokee Parkway; cost \$4000.

Ky., Louisville.—W. M. Reeser will erect 12 brick dwellings at 2210-40 Bismarck St.; cost \$19,200.

Ky., Louisville.—Ida K. Fink will erect brick-veneer dwelling at Alta and Edgewood Aves.; cost \$3000.

Ky., Mt. Sterling.—Mrs. E. E. Tharp will erect residence.

La., Donaldsonville.—Lemann Co. will rebuild boarding-house; construction by company. (Lately noted burned.)

La., New Orleans.—E. H. Keep will erect 2-story brick-veneer residence; F. J. MacDonnell, Archt., New Orleans.

La., New Orleans.—Judge Richard B. Otero will erect \$11,000 residence; John C. Diboll, Archt., 1239 Fern St., New Orleans; structure to be about 50x50 ft.; 2 stories, attic and basement; frame; tile roof; hardwood floors; hot-air heat, \$500; electric light, \$235. Address owner.

Md., Baltimore.—Jackson Realty Co., 812 Equitable Bldg., will erect 4 dwellings at Garrison Ave. and Ridgewood Rd.; 16x50 ft.; cost \$10,000.

Md., Baltimore.—E. J. Gallagher Realty Co., 919-20 Munsey Bldg., will erect 76 dwellings on Homestead St. at total cost of about \$125,400; 2 stories; porch fronts; electric and gas light; hot-water and hot-air heat.

Md., Baltimore County.—Walter B. Brooks, Jr., Commerce and Water Sts., Baltimore, is having plans prepared by Thos. Bond Owings, 347 N. Charles St., Baltimore, for dwelling in Green Spring Valley, former site of Avalon Inn; 3 stories; about 50x196 ft.; brick; colonial; private sewerage-disposal plant; cost about \$100,000; will also erect garage, stable and other buildings.

Md., Baltimore.—John J. Carlin, 215 St. Paul St., will erect 27 dwellings at Ashburton, 9 on Reisterstown Ave., 9 on Hillside Ave., 9 on Norfolk Ave. at conjunction of three; 2½ stories; 21.5x37 ft.; brick; slag roof; hardwood floor and trim; cost about \$30,000; construction by owner. (See Machinery Wanted.)

Md., Baltimore.—Frank O. Singer, 600 Equitable Bldg., Baltimore, has plans by W. B. Gerwig, same address, for 18 dwellings; 6 on Lakeview Ave., 8 on Chauncey Ave. E. of Linden Ave., 4 at Brookfield and Chauncey Aves.; all 2 stories; 16x55 ft.; brick; slag roof; steam heat; cost \$45,000; construction by owner.

Md., Baltimore.—M. C. Davis, 15 E. Fayette St., has plans by M. E. Davis, 3900 Elm St., Baltimore, for dwelling on Roland Ave. near 40th St.; 2 stories; 40x76 ft.; brick; tin roof; steam heat; cost \$6000; construction by owner.

Md., Baltimore.—Reliance Realty Co., Falls Rd. and Merryman Ave., has plans by Callis & Callis, 2055 Kennedy Ave., Baltimore, for 8 dwellings on Hohenhoff Pl. between 41st and 42d Sts.; 2 stories; 16x45 ft.; brick; tin roof; furnace heat; cost \$12,000; construction by owners.

Md., Chevy Chase.—Wm. L. Hillier is having plans prepared by John M. Donn, 1516 H St. N. W., Washington, D. C., for dwelling on Quincy St.; 2 stories; 32x75 ft.; brick; slate roof; Georgia pine floors; hot-water heat; electric light; cost about \$16,000; plans ready about June 1.

Miss., Biloxi.—Leo Wellhouse will erect residence at Deer Island.

Miss., Biloxi.—Frank B. Gallagher will erect residence to cost several thousand dollars.

Md., Middletown.—O. E. Fink will erect store and dwelling; 50x70 ft.; 2 stories; store 32x70 ft.; side dwelling, 2 upper flats; brick construction; tin roof; steam or vapor heat; electric light; not given out by contract; construction to begin about July 1. (See Machinery Wanted.)

Miss., Ripley.—J. N. Street will erect residence at Commerce and Pine Sts. to replace structure noted damaged by fire.

Mo., Kansas City.—B. A. Bowmaster will erect 9 bungalows.

Mo., Kansas City.—Minor D. Woodling, Pres. of Woodling Heating & Ventilating Co., will erect building at 5511 Wyandotte St.

Mo., Kansas City.—Dr. A. L. Skoog, 1004 Rialto Bldg., is having plans prepared by A. H. Buckley, Gloyd Bldg., Kansas City, for dwelling at Mission Hills; 2 stories; 10 rooms; ordinary construction; shingle roof; oak floors; electric lighting; cost \$7000; hot-water heat \$900; bids opened about June 1. (Lately noted.)

Mo., St. Louis.—Chas. E. Thomas is having plans prepared by Thos. P. Barnett & Co., St. Louis, for residence in Southmoor; buff brick; red tile roof; hardwood finish.

Mo., St. Louis.—Leisner Realty Co. will erect 2-story dwelling at 5742 DeGiverville St.; cost \$4000; construction by owner.

Mo., St. Louis.—Clarence W. Batdorf will erect 4 dwellings on Berlin Ave.; red matt brick; tile roof; colonial style; 8 or 9 rooms; hardwood floors; hot-water heat cost about \$9000 each.

Mo., St. Louis.—George Witsma will erect 10 cottages on Tholozan Ave. near Gustine Ave.; 5 rooms; granite porches; stone steps; brick construction; investment about \$37,000.

Mo., St. Louis.—H. A. von Rump will erect residence in Webster Park; clapboard and California red shingles; slate roof; 8 rooms and 2 sleeping porches; 2 sun parlors and 2 baths.

N. C., Goldsboro.—George and Joe Farfour will erect 2 dwellings John and Oak Sts.

N. C., Hazelwood.—R. L. Prevost is having plans prepared by Q. E. Herman, Hickory, N. C., for dwelling; 2 stories and basement; hot-water heat; electric lighting.

N. C., Lexington.—B. C. Young will erect residence; 2 stories; frame; 9 rooms; electric lights; furnace heat; cost about \$4000; Lella Ross Wilburn, Archt., 305 Peters Bldg., Atlanta.

N. C., Raleigh.—J. H. Pickard will erect 2-family residence; 1½ stories; frame; 10 rooms; stone foundation; electric lights; cost about \$3500; Lella Ross Wilburn, Archt., 305 Peters Bldg., Atlanta.

N. C., Tarboro.—J. E. Morrisette will erect residence; 2 stories; brick veneer; 9 rooms; colonial style; stone foundation; electric lights; hot-air heat; slate roof; hardwood floors; cost about \$4600; Lella Ross Wilburn, Archt., 305 Peters Bldg., Atlanta.

Okla., Laverne.—R. K. Kinney will erect 3 or 4 dwellings.

Okla., Okmulgee.—Dr. Cott has plans by Bert C. Overton, Okmulgee, for residence to cost about \$4000.

Okla., Okmulgee.—W. Thornburg has plans by Bert C. Overton, Okmulgee, for residence; mottled face brick; tile roofing; vitrified floor and wall tile; electric and gas fixtures; cost \$20,000.

Okla., Stigler.—Miss May Verndon has plans by C. G. Curtis, 18½ Lamar Ave., Paris, Tex., for \$3000 bungalow.

Tenn., Chattanooga.—H. B. Nicholson will erect residence; cost about \$3000.

Tenn., College Grove.—Dr. J. T. Johnson will erect residence; 2 stories; brick-veneer; composition shingle roof; hot-air furnace; oak floors; owner will purchase all materials; construction by day labor; cost \$10,000; C. K. Colley, Archt., 33-40 Life and Casualty Bldg., Nashville.

Tenn., Jackson.—H. W. Louis is erecting residence on Highland Ave.; cost \$9000.

Tenn., Memphis.—Miss Vera Daniel, 39 Main St., will erect dwelling on Kennelworth Ave.; 10 rooms; ordinary construc-

tion; composition roof; hot-water heat; hardwood floors; electric light; construction to begin June 1. (Lately noted.)

Tenn., Memphis.—Stanley H. Trezevant will erect residence on Peabody Ave.; stone-veneer; hardwood interior finish; cost \$10,000 complete.

Tenn., Memphis.—S. M. Williamson has plans by Hanker & Cairnes, Memphis, for residence on Stonewall Pl.; brick; 10 rooms; tile roof; cost \$11,000.

Tex., Dallas.—S. P. Darnell will remodel residence; electric fixtures.

Tex., Dallas.—E. F. Alt has plans for residence; face brick; electric fixtures; cost about \$3500.

Tex., Dallas.—W. L. Provine will erect 2-story 8-room frame residence at 4726 Swiss St.; cost \$3000.

Tex., Dallas.—R. H. Clem will erect 2-story 8-room frame residence at 5306 Tremont St.; cost \$3000.

Tex., El Paso.—W. H. Hanford will erect 2 seven-room bungalows on Happer St.

Tex., El Paso.—James L. Marr & Co. will erect 3 bungalows on Dallas and Rio Grande Sts.; cost about \$10,500.

Tex., El Paso.—D. C. Kloss will erect \$5000 bungalow.

Tex., El Paso.—W. E. Talbot will erect residence to cost \$6000 to \$7000.

Tex., Houston.—N. L. Ware will erect 6-room residence on Harold St.; cost \$3000.

Tex., Houston.—F. W. Fain will expend \$5000 to demolish and rebuild 2-story residence at Baker and Pine Sts.; cost \$5000.

Tex., Houston.—G. F. Cotter will erect residence on Lovett Blvd.

Tex., Houston.—F. V. Fourmy will erect 10-room residence on Caroline St.; cost \$5000.

Tex., Houston.—P. T. Beach will erect 5-room residence on Grant St.; cost \$3000.

Tex., Palmer.—Yancy Barron, Pres. of Palmer Pressed Brick Works, is erecting residence under supervision of Hayden King, Dallas.

Tex., Port Arthur.—H. D. Morris will erect residence; cost \$5000; Parker & Rittenberry, Archts., Port Arthur.

Tex., San Antonio.—Mrs. L. E. Payne, Houston, will erect residence on Iowa St.

Tex., San Antonio.—W. Fenstermaker will erect 12 five-room dwellings on Burnet St.; cost \$12,000.

Tex., San Antonio.—W. A. Baily will erect two 5-room dwellings on W. Woodlawn Ave. and Hammond Ave.; cost \$3300.

Tex., San Antonio.—Sam Friedman will erect five 5-room and one 4-room cottages on Peck and Fox Aves.; cost \$6150.

Tex., Sherman.—H. L. McDuffie will erect residence to replace structure lately burned at loss of \$3500.

Tex., Stephenville.—Chas. Neblette is erecting residence; brick veneer; hollow-tile walls; white cement trimming; 8 rooms and 2 baths; cost \$10,000.

Va., Richmond.—W. J. Gilman will erect 2-story brick dwelling on Grove Ave. between Boulevard and Sheppard St.; cost \$15,000.

Va., Richmond.—E. W. Bandy will erect 2-story frame dwelling at 1305 Barton Ave.; cost \$5000.

Va., Richmond.—Effie D. Cone will erect 2-story brick dwelling on 3d Ave. between Magnolia and Logan Sts.; cost \$4500.

Va., Richmond.—Claude E. Sprengle will erect 17 brick dwellings and 2 stores and flats at 23d and Venable Sts. and 23d and Burton Sts.; cost \$32,000; J. T. Skinner, Archt., Richmond; construction by owner. (Lately noted.)

Va., Richmond.—H. L. Golsan has not decided to erect dwelling at present. (Logan Golsan lately noted to erect dwelling.)

Va., Richmond.—W. F. Drinkard, 2001 Hanover Ave., will erect 2-story brick dwelling on Colonial Ave.; ordinary construction; tin roof; wood floor; cost \$3500; plans and construction by owner.

Va., Richmond.—L. J. Cheatwood will erect detached 2-story frame dwelling on 27th St. between Semmes Ave. and Spring Hill St.; cost \$3000.

W. Va., Bluefield.—L. J. Holland will erect \$8000 residence on Jefferson St.

W. Va., Princeton.—Dr. G. T. Epling opens bids May 29 to erect dwelling; 36x46 ft.; ordinary hollow tile and stucco construction; hot-water heat; electric lighting; built-up roof; cost \$5000; A. F. Wysong, Archt., Princeton, who may be addressed.

GOVERNMENT AND STATE

N. C., Charlotte.—Postoffice.—Treasury Dept., Jas. A. Wetmore, Acting Supervising Archt., Washington, D. C., opens bids July 2 to erect postoffice and courthouse, including mechanical equipment and approaches; 2 stories and basement; stone and brick facing; 17,000 sq. ft. ground area; fireproof construction; composition and copper roof; drawings and specifications at office of custodian and of Mr. Wetmore as above.

Miss., Laurel.—Postoffice.—Treasury Dept., Jas. A. Wetmore, Acting Supervising Archt., Washington, D. C., opened bids to erect postoffice; John G. Unkefer & Co., Minerva, Ohio, lowest bidder at \$68,000; 1 story and basement; 7000 sq. ft. ground area; fireproof except roof; stone facing below first floor line; tile and composition roof; wood and copper cornice. (Lately noted.)

N. C., Morehead City.—Mrs. W. J. Moore will erect building for postoffice and apartments.

Okla., Ardmore.—Postoffice.—Treasury Department, Jas. A. Wetmore, Acting Supervising Archt., Washington, D. C., opened bids to erect postoffice; Geo. W. Stiles Construction Co., 1036 Rookery Bldg., Chicago, is lowest bidder at \$120,200; 3 stories and basement; brick facing; 6000 sq. ft. ground area; fireproof; composition roof. (Lately noted.)

Tex., Fort Sam Houston.—Barracks, etc.—Quartermaster Dept. plans ultimate expenditure of \$100,000 at Aviation Post, Fort Sam Houston; triplicate bids received until June 4 by Constructing Quartermaster to erect commanding officers' quarters, two 4-set bachelor officers' quarters, barrack, administration building, and barrack and stable for pack train; also plans early erection of aeroplane hangars, blacksmith shop and installation of water distributing system, to include pump-house and water tank. (Lately noted.)

HOSPITALS, SANITARIUMS, ETC.

D. C., Washington.—Walter Reed Hospital is receiving bids for improvements, including addition to nurses' homes, alterations to main building, erection of kitchen and mess-room, etc.

Fla., Miami.—City is considering erection of hospital; cost about \$40,000; Dr. J. L. North, Sanitary Committeeman of City Council.

Ga., Cordele.—Cordele Sanatorium Co. (Dr. T. J. McArthur and others) acquired 12-room residence on Northern Heights and will erect addition to contain about 12 rooms.

Ky., Covington.—Salvation Army, W. & Barker, Property Secy., New York, will erect hospital to cost about \$100,000; 300 beds; 6 sun parlors, 6 fresh-air porches, 2 roof gardens, department for medicinal baths, etc.

Mo., Mt. Vernon.—Board of Mgrs. of Missouri State Sanatorium receives bids until June 5 to erect 2 brick buildings, including plumbing and heating; plans and specifications at office of H. H. Hohnschild, Archt., Suite 310-11-12 Navarre Bldg., St. Louis; Dr. J. L. Eaton, Pres.

Tex., Dallas.—St. Paul Sanitarium, Bryan and Hull Sts., has plans by J. Ed. Overbeck, 708-9 Wilson Bldg., Dallas, for sanitarium building; fireproof; slate roof; concrete floor; vacuum steam heat; electric light; 1 passenger, 1 freight elevator; cost about \$208,000; address Archt. (Lately noted.)

W. Va., Grafton.—City, F. C. Graham, Mayor, contemplates voting on \$15,000 bonds for hospital.

HOTELS

Fla., Jacksonville.—Windie Smith has plans by Benjamin & Ball, Jacksonville, for improvements to Hotel Windie; plans call for plate-glass front on Forsyth St., marble flooring, electric lights, etc.

Ga., Savannah.—Hibernia Realty Co. incorporated with \$35,000 capital stock by Jos. A. Galina, Thos. J. Dooley, John J. Bouban and others; acquired building at Bull and Broughton Sts. and will remodel for hotel; 71 rooms; G. C. Ransom, Archt., Savannah.

Okla., Boynton.—J. A. Watson has plans by Bert C. Overton, Okmulgee, Okla., for hotel; 2 stories; 30 rooms; 50x130 ft.; gravel roof; metal ceiling; galvanized-iron cornice; tile flooring; gas and electric fixtures cost about \$15,000. (Lately noted.)

Okla., Jennings.—Musselmen Hotel Co. will erect brick hotel.

Tenn., Nashville.—Maxwell House Co. is reported to expend about \$30,000 for improvements, including alterations to front, construction of cafe, lowering stores to street level, etc.

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Tenn., Nashville.—M. A. Simmons, Propr. of Merchants' Hotel, will expend \$6000 for improvements, to include enlarged dining-room, heating and ventilating system, additional baths, etc.

Tex., Killeen.—Bids received until May 24 to erect hotel for George W. West and install plumbing and heating; 2 stories; frame; 12 rooms with baths attached; lobby, dining-room and kitchen; about 100x70 ft.; plans and specifications at office of Bartlett & Ranney, Consult. Engrs., and W. E. Simpson, Consult. Engr., San Antonio.

Va., Petersburg.—Richard A. Munden, 303-046 Mechanics' Bldg., Petersburg, prepared plans for alterations and additions to Hotel Jefferson; bids opened May 25.

W. Va., Beckley.—Beckley Hotel Co. is having plans prepared by A. Z. Lilly, Beckley, for hotel, with storeroom 22x60 ft.; 56x100 ft.; 5 stories; ordinary construction; built-up roof; tile and wood floors; hot-water heat; electric lighting; passenger elevator 55x ft.; cost \$40,000; bids opened July 1. Address A. F. Wyson, Princeton, W. Va. (Lately noted.)

MISCELLANEOUS

Ala., Mobile.—Market.—Orange Belt Traction Terminal Market, 156 St. Francis St., has plans by J. O. Stone, Mobile, for produce commission house and market at Government St. and M. & O. R. R. and N. O., M. & C. Belt Line; frame; construction begins about Aug. 1; cost \$5000 without mechanical equipment. Address owners. (Lately noted.)

D. C., Washington.—Peace Building.—Carnegie Endowment for International Peace, 2 Jackson Pl., indefinitely postponed remodeling buildings. (Lately noted.)

Fla., DeLand.—A. S. Nidor will erect hall, store and office building. (See Stores.)

Fla., Orlando.—Skating Rink.—C. A. Hovey will erect skating rink and store building; 70x200 ft.; skating rink, 70x100 ft.; 1 store, 18x40 ft., 1 35x40 ft.; mill construction; galvanized-iron roof; hard maple floor; city light; cost \$8000; construction begun. (Lately noted.)

Ga., Atlanta.—Clubhouse.—Capital City Club will remodel clubhouse at Brookhaven; ordinary construction; composition and slate roof; extension of Webster vapor heating, \$1700; \$400 wiring extension; 2 dumb-walters; cost \$12,000; work by day labor under supervision of S. C. Aikens, 607 Forsyth Bldg., Atlanta; A. Ten Eyck Brown, Archt., Atlanta; address Mr. Aikens; construction begun; lately noted. Also erecting superintendent's cottage; golf shop; cost \$1800. (See Machinery Wanted.)

Ga., Atlanta.—Fair.—Southeastern Fair Assn. accepted plans by Edwards & Sayward, Atlanta, for layout and sketches for buildings at Lakewood and ordered drawings at once for 2 structures to cost \$150,000; main group to consist of 3 principal buildings arranged around court of honor, court treated with sunken garden, etc.; mission style; light stucco with red Spanish tile coping; practically fireproof; reinforced concrete frame; hollow tile curtain walls stuccoed; each building to comprise rectangle about 100x400 ft.; buildings lighted both by sidelights and clerestory extending length of building; R. M. Walker, Supt. of Construction. (Lately noted.)

Ky., Herndon.—Barns, etc.—Thos. Jones is erecting 2 barns, 48x56 ft.; one 48x72 ft., and 10 or 12 smaller buildings for tenant-houses, silos, tobacco barns, stock barns, shop, tool-house, etc.; ordinary construction; metal roof; pine floors; cost \$6000 to \$7000; plans and construction by owner; work begun; material purchased. (Buildings lately noted destroyed by cyclone.)

Md., Baltimore.—Shed.—Horstmeier Lumber Co. will erect office and shed. (See Bank and Office.)

Miss., Vicksburg.—Clubhouse.—B'nai B'rith Society, Joe Hirsh, Pres., will rebuild structure noted damaged by fire at loss of \$50,000.

N. C., Winston.—Fair.—Bright Leaf Tobacco Belt Fair Assn. is having plans prepared for first building to be erected at Fair Grounds; frame; 50x150 ft., with sloping roof; to contain grandstand.

S. C., Greenwood.—Orphanage.—Connie Maxwell Orphanage, A. T. Jamison, Supt., will erect girls' dormitory; 14 rooms; ordinary construction; tin roof; electric lighting; cost \$7000; heating, \$600; bids opened May 26.

Va., Roanoke.—Auditorium.—Roanoke Auditorium Co., Inc., is having plans prepared by H. M. Miller, Roanoke, associated with local architects, for auditorium; final drawings about complete. (Previously reported to cost about \$40,000.)

RAILWAY STATIONS, SHEDS, ETC.

Ala., Tuscaloosa.—Birmingham-Tuscaloosa Ry. & Utilities Co., Geo. I. Brown, Gen. Mgr., will erect freight warehouse, etc.

Ark., Morrilton.—Missouri Pacific Ry. Co., E. A. Hadley, Ch. Engr., Railway Exchange Bldg., St. Louis, contemplates erecting station; details not decided. (Lately noted.)

Fla., Jacksonville.—Florida R. R. Com., Tallahassee, directed Jacksonville Terminal Co., W. L. Morse, Ch. Engr., to begin construction of proposed terminal depot by Nov. 15; reported cost \$500,000. (Previously noted.)

Okla., Drumright.—Gulf, Colorado & Santa Fe R. R. will not build depot as lately reported.

Tex., Coleman.—Gulf, Colorado and Santa Fe R. R., F. Merritt, Chief Engr., Galveston, has plans for passenger station; 25x130.6 ft.; partially fireproof; tile roof; concrete floor; cost \$25,000; hot-water heat, \$2000; electric lighting, \$1500; platform to have 4 arc lights on cast-iron standards; bids opened May 31. Address Mr. Merritt. (Lately noted.)

SCHOOLS

Ala., Mobile.—Mobile County School Commissioners, H. T. Hartwell, Pres., is considering \$150,000 bond issue for school improvements.

Ark., Wynne.—City voted tax to erect high school; S. R. Curtis and T. N. Hoyt, directors.

Fla., Anclote.—J. W. Sanders, County Supt., Dade City, Fla., will let contract to erect school. (See Fla., New Port Richey.)

Fla., Lake Butler.—F. G. Schell, Supt. Board of Public Instruction of Bradford County, Starke, Fla., receives bids until June 7 to erect 4 brick and framed classrooms to be added to present school according to plans by W. W. Simmons, McRae, Ga.; plans and specifications from L. W. Kiehlter, Starke.

Fla., Mims.—Bids will be received at office of E. E. Macy, Supt. Brevard County Public Schools, Egualle, Fla., until June 7 (extended date) to erect graded-school building; about 41x120 ft.; reinforced concrete walls; ordinary construction; composition roof; cost about \$12,000; plans at the office of A. E. Lewis, Archt., 24-6 Real Estate Bldg., Miami, Fla. (Lately noted.)

Fla., New Port Richey.—J. W. Sanders, County Supt., Dade City, Fla., will let contracts June 14 to erect schools as follows: At New Port Richey; 35x50 ft.; composition roof; Mr. Connell, New Port Richey, Archt.; cost \$2500. At Pasco, Fla.; 36x48 ft.; cost \$1200. At Anclote, Fla.; 24x36 ft.; cost \$750; all frame; wood floor. (Lately noted.)

Fla., Pasco.—J. W. Sanders, County Supt., Dade City, Fla., will let contract to erect school. (See Fla., New Port Richey.)

Fla., Seadrift.—Seadrift Common School Dist. votes June 15 on \$17,500 bonds to erect brick school. Address District School Trustees.

Fla., Seminole.—Seminole School Dist. voted \$5000 bonds and is having plans prepared for school. Address Dist. School Trustees.

Fla., Tampa.—Board of Public Instruction, Wm. Schneider, Chrmn., receives bids until June 15 to erect Tampa Heights School; plans and specifications at office of Francis J. Kennard, Archt., American National Bank Bldg., Tampa. (Lately noted.)

Fla., Tampa.—Marshall Moore, Supt. of Schools, receives bids until June 15 to erect Oak Park School on 7th Ave. and school on S. Oregon Ave.; former 8 rooms, brick, ordinary construction; Neponset shingle roof, pine floor, cost about \$7000; latter 32x61 ft., frame, Neponset shingle roof, pine floors, cost \$4000; A. H. Johnson, Archt., Tampa. (Lately noted.)

Fla., Ybor City, Ind. Sta., Tampa.—Marshall Moore, Secy. Board of Public Instruction, Tampa, receives bids until June 15 to erect school; plans and specifications at office of A. L. Shaw, Archt., Tampa.

Ga., Atlanta.—Board of Education rejected bids to erect 3 schools. (See Contracts Awarded, Schools.)

Ga., Waynesboro.—City, F. M. Oates, Mayor, voted \$19,000 bonds for schools. (Lately noted.)

Ky., Lewisburg.—Lewisburg Consolidated School Dist. will erect \$15,000 school. Address Dist. School Trustees.

Ky., Whitley City.—School Board, Miss Nora E. Alcorn, Supt. County Schools, is having plans prepared by Frank L. Smith, Lexington, Ky., for school building; 62x60 ft.; ordinary construction; tar and gravel

roof; wood floors; cost \$10,000; hot-air heat, \$600.

La., Alexandria.—Poland School Dist. No. 20 voted \$16,000 bonds to erect school; Jonas Rosenthal, Prest Parish School Board. (Lately noted.)

La., Gilbert.—Ward 2 voted \$18,000 bonds to erect school. Address Dist. School Trustees.

La., Glenmora.—Glenmora School Dist. No. 27 voted \$25,000 bonds to erect high school; Jonas Rosenthal, Prest Parish School Board, Alexandria, La. (Lately noted.)

Md., Hchester.—Donaldson School has plans by Mottu & White, 322 N. Charles St., Baltimore, for building; 67x68 ft.; 2 stories; ordinary construction; corridor fireproof; slate roof; wood floor, except corridor, which will have tile and concrete; central heating plant to heat several buildings; electric light; cost about \$25,000; bidders are Willard E. Harn Co., 213 N. Calvert St.; Cowan Building Co., 106 W. Madison St.; Gladfelter & Chambers, 729 Roland Ave.; Walter E. Burnham, Law Bldg.; Thos. B. Stanfield, 212-Clay St.; all of Baltimore; bids due May 27. (Previously noted.)

Miss., Amory.—H. L. Tschudi, City Clerk, receives bids until June 8 to erect brick high school; plans and specifications at office of Ben Price, Archt., 518-19 Empire Bldg., Birmingham. (Lately noted.)

Mo., Carthage.—Board of Education will not erect building; will purchase building and site. (District lately noted voting bonds.)

N. C., Aurora.—Aurora School Dist. is considering election on \$7500 bonds for schools. Address Dist. School Trustees.

N. C., Barnardsville.—Barnardsville School Dist. voted \$6000 bonds to erect school. Address Dist. School Trustees.

N. C., Benson.—School Dist. No. 1 voted \$30,000 bonds to purchase site and erect school building; structure to have composition flat roof; wood floors; cost \$18,000 to \$20,000; Frank K. Thompson, Archt., Raleigh, N. C.; J. H. Rose, Secy. Board. (Lately noted.)

N. C., Chapel Hill.—City voted \$35,000 bonds to erect graded school. Address The Mayor.

N. C., Durham.—School Trustees, Mr. Pusey, Supt. of City Schools, will rebuild Morehead Grade School noted damaged by fire at loss of \$35,000.

N. C., Gastonia.—City votes June 22 on \$100,000 bonds for fireproof schools; C. B. Armstrong, Mayor.

N. C., Oxford.—Granville county votes June 19 on bonds for schools. Address Board of Education.

Okla., Cornish.—Cornish School Dist. No. 14 voted bonds to erect addition to school. Address Dist. School Trustees.

Okla., Clinton.—City voted \$35,000 bonds to erect school. Address The Mayor.

Okla., Cushing.—Board of Education is having plans prepared by J. O. Parr, Security Bldg., Oklahoma City, for 2 schools; 60x70 ft.; semi-fireproof; pitch and gravel roof; wood floors except stairways and corridors; direct-indirect steam heat; cost \$15,000 each; bids opened May 24. Address John Foster, Secy., Cushing. (Lately noted.)

Okla., Durant.—Oklahoma Presbyterian College for Girls is considering erection of 3-story college building to cost \$40,000.

Okla., Edmond.—State Board of Control is having plans prepared for previously-noted building. (See Okla., Norman.)

Okla., Enid.—State Board of Control is having plans prepared for previously-noted building. (See Okla., Norman.)

Okla., Hitchcock.—Hitchcock Consolidated School Dist. voted bonds to erect school. Address Dist. School Trustees.

Okla., Muskogee.—State Board of Control is having plans prepared for previously-noted building. (See Okla., Norman.)

Okla., Norman.—State Board of Control, Oklahoma City, is having plans prepared by Layton & Smith, Oklahoma City, for \$100,000 laboratory building at Norman, \$50,000 school building at Edmond, 110x58 ft.; \$50,000 dormitory for School for Blind at Muskogee and \$50,000 dormitory at Enid; fireproof; cement floors; steam heat; electric lighting; let contracts about July 1.

Okla., Pryor.—Board of Education opens bids about June 10 to erect high-school on Main St. between Hogan & Cherokee Sts.; about 70x80 ft.; ordinary construction; probably steam-heating plant to cost about \$1200; electricity from city plant; cost \$10,000 without mechanical equipment; construction begins about June 20. (Lately noted.)

Okla., Sapulpa.—City voted \$150,000 bonds to erect high school. Address The Mayor. (Lately noted.)

Okla., Supply.—School Dist. No. 57 voted \$10,000 bonds to erect and equip school building; W. B. Hanly, director, Supply. (Lately noted.)

S. C., Greenville.—City voted \$75,000 bonds for schools; P. T. Hayne, Chrmn. Board of Trustees.

Tenn., Carthage.—School Board opens bids June 1 at office of A. C. Read, Mayor, to erect school building; 56x110 ft.; 2 stories; 8 rooms; ordinary construction; three-ply composition roof; gravity steam-heating system; cost \$12,500; C. K. Colley, Archt., 33-40 Life and Casualty Bldg., Nashville, who may be addressed. (Lately noted.)

Tenn., Clarksville.—Catholic church, Rev. Father Nolan, pastor, will erect school building; cost about \$20,000; construction begins about July 1.

Tex., Ballinger.—Ballinger Ind. School ing; steam or hot-air heat; voted \$9000 bonds. Address Scott H. Mack, Ballinger. (Lately noted.)

Tex., Ballinger.—Three common school districts of Runnels county vote June 15 on school bonds aggregating \$9300; one district voted \$4000 bonds for school; M. Kieberg, County Judge, Ballinger.

Tex., Celina.—School Board, J. L. Wilson, Secy., receives bids until May 31 to erect high school; plans and specifications at office of Wm. Albert Tackett, Archt., Sherman, Tex. (Lately noted.)

Tex., Dallas.—School Board has plans by Wm. B. Ittner, St. Louis, for South Dallas High School and will probably receive bids June 15 to erect; fireproof; 4 stories and basement; to accommodate about 1500 pupils.

Tex., Dallas.—Southern Methodist University, Dr. R. S. Hyer, Pres., is reported to soon let contracts to erect 3 dormitories for men, each to accommodate about 50 students and have dining-room; let contract for well to supply college and adjoining territory, and will soon build standpipe. (Other improvements previously noted.)

Tex., Godley.—Godley Ind. School Dist. receives bids until May 31 to erect school building; 62x81 ft.; gravel roof; heaters; cost \$15,000; T. J. Galbraith, Archt., 718 Slaughter Bldg., Dallas. Address J. H. McBride, Godley. (Lately noted.)

Tex., Gonzales.—School Dist. No. 43 votes on \$4000 bonds to erect brick school. Address Dist. School Trustees.

Tex., La Porte.—La Porte Ind. School Dist. proposes election in July or Aug. on \$30,000 bonds to erect brick school; Arch McDonald, Arthur Muldoon, Geo. Van Pelt and others, School Board.

Tex., Littlefield.—School Board is having plans prepared by M. L. Waller & Co., Fort Worth and Abilene, Tex., to erect school building; about 60x70 ft.; brick and frame; 6 classrooms with auditorium on second floor; ventilated schoolroom heaters; toilets in separate building; cost about \$10,000; bids opened about June 15. Address W. G. Street, Secy., Littlefield. (Lately noted.)

Tex., Merkel.—Merkel Ind. School Dist. Trustees plan to issue \$18,000 bonds to erect school.

Tex., Nacogdoches.—Nacogdoches Ind. School Dist. No. 1 will probably vote on \$60,000 bonds to erect school. Address Dist. School Trustees.

Tex., Palestine.—City is considering election on \$100,000 bonds to erect high school. Address The Mayor.

Tex., Post Oak, Route 3, Blossom, Tex.—Trustees are having plans prepared by C. G. Curtis, 18½ Lamar Ave., Paris, Tex., for school.

Tex., San Diego.—San Diego Independent School Dist. votes June 5 on \$18,000 to erect school and equip and maintain manual-training department and laboratory. Address Dist. School Trustees.

Tex., Somerville.—School Board, John H. Mauer, Secy., sold \$12,000 bonds to erect school building.

Tex., Temple.—City, J. T. Martin, Secy., receives bids until June 8 to erect 2-story 6-room annex and heating plant for 16-room school; plans and specifications on application to Mr. Martin. (Lately noted.)

Tex., Temple.—City, J. T. Martin, Clerk, has plans by J. H. Davis, Temple, for 2 school buildings; one on Freeman Heights, other on Bentley Hill; 30x70 ft.; 2 stories; fireproof; composition roof; reinforced concrete floors with wood surface; no heating or lighting; cost \$10,000 each; bids opened May 18; lately noted; also opens bids June 8 to erect annex to school building on S. 5th St.; 19x75 ft., with basement; fireproof; composition roof; concrete floors with wood surface;

steam heat; cost \$15,000; J. H. Davis, Archt., Temple. Address Mr. Martin.

Va., South Boston.—School Board will erect addition to high school on Main St.; 3 rooms and basement; metal or slate roof; city lighting; cost \$16,000; construction to begin about July 1. Address John O. Watkins, South Boston. (Lately noted.)

Va., Staunton.—School Board accepted plans by Collins & Son, Staunton, for two colored schools, and will soon advertise for bids. (Lately noted having plans for 2-story 6-room school at Sunnyside.)

W. Va., Dunbar.—Board of Education of Union Dist., Kanawha county, ordered election on May 29 on \$10,000 bonds to build, complete and furnish high school; J. B. Finney, Prest., Charleston, W. Va.

W. Va., Glenville.—See W. Va., Morgantown.

W. Va., Huntington.—See W. Va., Morgantown.

W. Va., Morgantown.—State Board of Control, J. S. Lakin, Prest., Charleston, W. Va., receives bids until June 29 for all work and furnishing materials to complete following buildings, according to plans and specifications by H. Rus Warner, Charleston: West Virginia University, Morgantown (1) addition to mechanical hall, 141x44 ft.; 1 wing 67x4 ft., another 55x43 ft., slow-burning construction, 3 stories, brick and terra-cotta, slate and composition roof; (2) building for School of Medicine, 75x55 ft., brick walls, 3 stories, wood joist construction and composition roof; Glenville State Normal School, Glenville, W. Va., dormitory building, 169x50 ft., 3 stories and basement, brick and stone, slate roof, ordinary construction; Marshall College (previously noted), Huntington, W. Va., science hall, 143x79 ft., brick and terra-cotta, 3 stories, first floor reinforced concrete with composition top finish, second and third floors joist construction, composition roof; plans and specifications and blank forms of proposals at office of board as above.

STORES

Ala., Birmingham.—T. H. Molton will erect business block to contain 7 stores; H. B. Wheelock, Archt., Birmingham.

Ala., Gadsden.—Gulf States Steel Co., Alabama City, Ala., will rebuild commissary; 50x130 ft.; brick; composition roof; concrete and cement floor; steam heat from central plant; electric light; cost \$8000; plans and construction by owner; construction begun. (Lately noted.)

Ark., Conway.—W. D. Cole, Jr., will erect 2 stores at 219-21 E. Oak St.; 50x110 ft.; ordinary construction; pitch and gravel roof; concrete floor; cost \$6000. (Lately noted.)

D. C., Washington.—F. G. Carpenter will erect 2-story brick store at 1143 Connecticut Ave.; cost \$7000; Clark Waggaman, Archt., 1124 Connecticut Ave. N. W., Washington.

D. C., Washington.—Dr. B. Bayne has plans by Clark Waggaman, 1124 Connecticut Ave. N. W., Washington, for 2-story brick store at 1141 Connecticut Ave. N. W.; cost \$7000.

Fla., Daytona Beach.—V. S. Shelly has plans by D. F. Fuquay, Daytona Beach, Fla., for store and office building at Atlantic and Seabreeze Aves.; 50x80 ft.; ordinary construction; composition roof; wood floor; cost \$10,000; contract to be let immediately.

Fla., DeLand.—A. S. Nidor has plans by F. M. Miller, DeLand, for building; 2 stories; brick; 35x34 ft.; tin roof; lower floor for 2 stores; second floor for hall and offices; bids opened May 25.

Fla., St. Petersburg.—B. T. Boone will erect 4 stores on Central Ave.; brick and concrete block.

Fla., Tampa.—P. H. Collins will erect 2-story brick building at Tampa and Whiting Sts.; cost \$3370.

Ga., Atlanta.—Mrs. Mollie V. Taylor will erect business building on Capitol Ave.

Ga., Columbus.—Ellis Cohen has plans by C. T. Hickman, Columbus, for store building; 2 stories; 32x75 ft.; brick; metal roof; cost \$5000; bids opened May 21.

Ga., Gainesville.—F. P. Jackson will erect store and office building; 40x90 ft.; ordinary construction; composition roof; wood floor; steam heat; cost about \$10,000; construction by owner with day labor to begin June 18. (Lately noted.)

Ga., Savannah.—J. W. Seay acquired 150-ft. site on Broughton St. between Drayton and Bull Sts. and will erect business building.

Ky., Louisville.—Adam Vogt will erect brick addition to building at 514 S. 5th St.; cost \$3500.

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brick addition to building at 514 S. 5th St.; cost \$3500.

La., New Orleans.—Phillip Foto will erect business building; pressed-brick front; composition roof.

La., New Orleans.—Maison Blanche Co. will erect addition to present building at Canal and Dauphine Sts.; 35x150 ft.; fireproof; ice-air plant; improved elevator service; automatic fire sprinklers, etc.; Emile Well, Archt., Whitney-Central Bldg., New Orleans.

Md., Baltimore.—Thomas O'Neill of O'Neill & Co., Charles and Lexington Sts., acquired property at 1310-18 N. Charles St., and will erect business buildings; details not determined; architect not selected.

Md., Baltimore.—J. Marshall Thomas is having plans prepared by Theo. W. Pietsch, 1210 American Bldg., Baltimore, to remodel dwelling at 518 N. Charles St. for store and office building; 4 stories; 30x155 ft.; marble front; interior remodeling; electric lighting; plumbing; cost about \$15,000; plans ready about June 15. (Lately noted.)

Md., Middletown.—O. E. Fink will erect store and dwelling.

Mo., Kansas City.—E. P. and J. F. Moriarty will erect 6-story building.

Mo., Kansas City.—Frederick Stearns & Co., Detroit, Mich., leased 3-story and basement building at 21st St. and Grand Ave. and will expend about \$20,000 for improvements to include front of cut stone, terra-cotta and plate glass, sprinkler system, provision for additional stories later.

N. C., Hickory.—L. Flaglar is having plans prepared by Q. E. Herman, Hickory, for store building; 2 stories; brick; 2 plate-glass fronts.

Okla., Morris.—Mrs. M. Coble has plans by Bert C. Overton, Okmulgee, Okla., for business building; 2 stories; 100x140 ft.; gravel roofing; skylight; tile floor; gas and electric fixtures; cost about \$25,000.

Okla., Sand Springs.—John Gladson will erect brick business building.

S. C., Anderson.—J. H. Anderson has plans by Casey & Fant, Anderson, for business building; 18x100 ft.; ordinary construction; tin roof; copper set plate and prism glass; terra-cotta cornices; tile copings; rough tex brick; hand elevator; bids opened June 1.

Tenn., Johnson City.—B. P. O. E. plans to erect store and lodge building. (See Association and Fraternal.)

Tenn., Memphis.—Knights of Pythias plan to erect store and lodge building. (See Association and Fraternal.)

Tenn., Nashville.—Sam Rashea will erect 2-story business building on Jo Johnston Ave.; Harry Frahn, Archt., Nashville.

Tex., Dalhart.—R. S. Coon will erect business building.

Tex., Dallas.—S. F. Murphy will erect business building; 2 stories; brick; 50x100 ft.

Tex., El Paso.—R. E. McKee will erect 2-story addition to building on Munday Heights.

Tex., Galveston.—Capt. W. D. Haden will convert 3-story building at 21st and Market Sts. into 6-story store and office building; cost \$70,000; L. S. Green, Archt., Galveston.

Tex., Galveston.—Steve Sgitovich is reported to erect building at 25th and Mechanic Sts.

Tex., San Angelo.—Irve Ellis, Menard, will remodel buildings at cost of about \$10,000.

Va., Richmond.—Claude E. Sprengle will erect 2 stores and flats. (See Dwellings.)

Va., Richmond.—H. L. Strange & Co. will erect brick addition to store at 500 N. 25th St.; cost \$6000.

W. Va., Parkersburg.—Walker & Hiteshaw open bids about June 15 to erect store, office and lodge building on Market St.; 44x100 ft.; 3 stories; ordinary construction; slag roof; first floor concrete, others wood; cost \$16,000; R. H. Adair, Archt., 501½ Juliana St., Parkersburg, who may be addressed. (Lately noted.)

THEATERS

Fla., Tampa.—Strand Amusement Co. has plans by Bonfoey & Elliott, Tampa, for motion-picture theater at Tampa and Twigg Sts.; 105x105 ft.; reinforced concrete frame; hollow tile curtain walls; composition roof over reinforced gypsum block construction; exterior stuccoed; interior Moorish and Spanish style; cost, exclusive of pipe organ, \$50,000; plans out to contractors May 22; bids due about June 1. (Lately noted.)

Mo., St. Louis.—St. Louis Amusement Co., Alfred H. Murphy, Prest., will erect moving-picture theater at 208-10 N. 6th St.; fire-

proof; seating capacity, 600; balcony to seat 400 additional.

N. C., Asheville.—L. Blomberg will remodel building at 17 Patton Ave. for moving-picture theater; 23x140 ft.; ordinary construction; tar and gravel roof; hardwood and tile floors; steam heat; construction begun; cost \$10,000; Decorators' Supply Co., Archt., Chicago. Address owner. (Lately noted.)

Okla., Oklahoma City.—Kaufman Investment Co. is reported interested in erection of vaudeville theater at 23 N. Robinson Ave., to cost \$50,000, and for which plans are being prepared.

Tenn., Murfreesboro.—Tony Sudekum, of Crescent Amusement Co., Nashville, Tenn.,

acquired Citizens' Theater and will remodel; Oscar Altman will be manager.

WAREHOUSES

Ark. Pine Bluff.—Silbernagle & Son will erect warehouse; cost about \$10,000.

N. C., Newbern.—Lucas & Lewis are reported to erect tobacco warehouse in Riverside.

N. C., Winston-Salem.—R. J. Reynolds Tobacco Co. is reported to erect warehouse on E. 4th St.; steel construction; cost about \$15,000.

S. C., Sumter.—W. W. Rowland, Sumter, and James H. Cheatham, Henderson, N. C., are reported to erect tobacco warehouse.

BUILDING CONTRACTS AWARDED

APARTMENT-HOUSES

Fla., Jacksonville.—H. S. Walker, 403 Main St., Jacksonville, has contract to erect apartment and store building at 403 Main St. (See Stores.)

Fla., St. Augustine.—Mrs. Emma S. Pacetti let contract to E. J. Masters to erect apartment-house; 26x38 ft.; asbestos shingle exterior; tin roof; double floor; electric and gas light; cost \$3000; F. A. Henderich, Archt., St. Augustine. (Lately noted.)

Ga., Atlanta.—P. C. McDuffie and F. E. Mackle have plans by and let contract to Mackle Construction Co., 809 Grant Bldg., Atlanta, to erect apartment-house at 6th St. and Piedmont Ave.; 3 stories; ordinary construction; tile roof; wood floors; steam heat; electric lighting; cost \$30,000. Address Contr.

Ga., Atlanta.—Lucien L. Knight will erect 2-story brick-vener apartment-house at 328-3236 E. North Ave.; 8 suites; H. W. Nicholes & Co., Contrs., Atlanta.

Ga., Atlanta.—Mrs. Annie E. Russey let contract to Denman & Standridge, Atlanta, to erect 2-story frame apartments at 358-60 E. Georgia Ave.; cost \$7500.

Ga., Atlanta.—Mrs. Field let contract to W. H. S. Hamilton, Atlanta, to erect apartment-house; brick veneer; stone veranda foundation; tile and tar and gravel roof; tile bath and porch floors; furnace heat; cost about \$6500; Lella Ross Wilburn, Archt., 205 Peters Bldg., Atlanta.

Ga., Savannah.—A. J. Cohen let contract to erect store and apartment building. (See Stores.)

Ga., Savannah.—F. M. Oliver let contract to R. W. Wimbish, Savannah, to erect apartment-house at Bull and 36th Sts.; 112x48 ft.; ordinary construction; metal roof; service lift; cost \$16,500; Henrik Wallin, Archt., Savannah; address contractor. (Lately noted.)

Mo., Kansas City.—John Connell, 3535 Forest St., let contract to Geo. W. Dooley, Kansas City, to erect 6-apartment building; 40x46 ft.; 3 stories; ordinary construction; tar and gravel roof; cost \$10,000; steam heat, \$300; electric lighting, \$250; Ernest O. Brostrom, Archt., Kansas City. (Lately noted.)

Mo., St. Louis.—Lindell Fair Grounds Realty Co. let contract to August Winkel, St. Louis, to erect 3-story tenement-house at 3523 University Ave.; cost \$18,000; also to erect one-story \$2000 garage, and erect three-story store and apartment building at 2334-46 N. Grand Ave.

Mo., St. Louis.—H. McVeigh let contract to A. H. Weidtt, St. Louis, to erect 2-story tenement-house at 5362 Minerva St.; cost \$4000.

Mo., St. Louis.—Girard Realty & Building Co. let contract to W. J. Hummelsheim, St. Louis, to erect three 2-story tenements at 4151-61 Shaw Ave.; 4 suites each; brick enclosed sleeping porches; hardwood floors; tile baths; steam heat; brick fireplaces; cost \$24,000.

Mo., St. Louis.—Jos. Liedl let contract to M. Laherty, St. Louis, to erect 2-story tenement-house at 5223 Romaine St.; cost \$4000.

Mo., St. Louis.—Josephine Sanguinet let contract to General Contracting Co., St. Louis, to erect 2-story tenement-house at 3672 McRee St.; cost \$5000.

Tenn., Memphis.—Mrs. M. R. McElroy let contract to M. R. McElroy, Memphis, to erect 2-story brick flat at 1200 Dorothy Pl.; cost \$11,000, including hot-water heating plant and wiring.

Tex., El Paso.—H. L. Hart let contract to Phoenix-El Paso Building Co., El Paso, to erect apartment-house on Montana St.; 2 stories; 4 apartments, 4 rooms each; ordinary construction; Flexatile roof; oak and vertical grain floors; electric lighting; cost \$10,000; Burnham or Ideal steam heat, about \$600; O. H. Thorman & Co., Archts., El Paso;

address contractors. (Phoenix-El Paso Building Co. lately noted to erect building.)

Tex., Galveston.—Galveston Brewing Co. let contract to erect store and apartment-house. (See Stores.)

W. Va., Huntington.—Henry Meadows is reported to have let contract to erect store and apartment building. (See Stores.)

W. Va., Welch.—R. L. Hutson let contract to B. E. Lucas & Co., Northfork, W. Va., to erect apartment-house; 46x100 ft.; 2 stories and basement; ordinary brick construction; asphalt roof; hot-water heat; electric lighting; cost \$14,455; A. F. Wysong, Archt., Princeton, W. Va. Address contractors. (Previously noted.)

ASSOCIATION AND FRATERNAL

Tenn., Union City.—B. P. O. E. let contract to Spradlin & Son, Hickman, Ky., to erect 2-story brick building; cost \$8500.

BANK AND OFFICE

Tex., Dallas.—Federal Reserve Bank let contract to H. J. Curtis, Dallas, to remodel building for bank; 25x100 ft.; 5 stories; fireproof; composition roof; reinforced concrete floors; steam heat; electric lighting; Hubbell & Greene, Archts., Dallas. (Lately noted.)

Tex., El Paso.—Commercial National Bank let contract to O. P. Kroeger, El Paso, to erect bank at Mills St. and Mesa Ave.; 3 stories; 50x90 ft.; brick with terra-cotta facing; skeleton steel construction; composition roof; reinforced concrete floor construction; bank to occupy 50x30 ft. of first floor, stores to complete first floor; foundation to support 11 additional stories; cost \$75,000; \$3500 steam heating plant; Trost & Trost, Archts., El Paso; address contractor. (Lately noted.)

Tex., Littlefield.—First National Bank let contract to J. B. Maxey, Plainview, Tex., to erect bank building; 25x90 ft.; 2 stories; brick. (Lately noted.)

Tex., Houston.—M. E. Foster let contract to G. C. Street, Jr., Houston, to erect business building; 2 stories; completion by June 15; G. W. Collinson, Archt., Houston; will be occupied by Western Newspaper Union.

Tex., Waxahachie.—Mrs. Johnnie Skinner, Dallas, let contract to W. W. Wolston, Waxahachie, to erect bank and office building; 27x30 ft.; brick and cement stone; Adamite roof; concrete and wood floors; stoves; electric lighting; cost \$9500; Lang & Wittichell, Archts., Dallas; lately noted; address owner. (See Machinery Wanted.)

Va., Charlottesville.—Charlottesville & Albermarle Ry. Co., J. L. Livers, V.P., let contract to King Lumber Co., Charlottesville, to erect office building and substation. (See Electric Plants.)

Va., Richmond.—Joseph Bryan estate let contract to J. T. Wilson & Co., Richmond, to erect office building at 22-24 N. 9th St. and 815 E. Franklin St.; 2 stories; cost \$25,000; C. W. Isbell, Archt., Richmond. (Lately noted.)

CHURCHES

Fla., Apalachicola.—Colored Methodist Church let contract to Geo. H. Marshall, Apalachicola, to erect building; brick; 50x65 ft., with ell 20x25 ft.; red pressed brick; arched windows; cost about \$12,000. (Lately noted.)

Fla., Daytona Beach.—M. E. Church has plans by and let contract to D. F. Fuquay, Daytona Beach, to alter and erect addition to building; ordinary construction; shingle roof; wood floor; steam heat; cost \$7000; construction begun.

Fla., Seabreeze.—First Baptist Church let contract to E. E. Johnson, Daytona Beach, Fla., to erect building; 40x65 ft.; ordinary

construction: asphalt shingle roof; wood floor; cost \$800; D. F. Fuquay, Archt., Daytona Beach; construction begun.

Mo., St. Louis.—Hope Congregational Church let contract to G. Neff, St. Louis, to erect 2-story dwelling at 1636 Semple St.; cost \$2500.

Tex., Galveston.—St. Patrick's Church, Rev. J. S. Murphy, pastor, let contract to Ernest Pest to complete construction of building; Gothic style; N. J. Clayton, Archt.

Va., Norfolk.—Freemason Street Baptist Church, F. L. Nicholson, Chrmn. Building Com., let contract to Mercer & Johnson, Norfolk, to erect Sunday-school building; 30x105 ft.; 3 stories; ordinary construction; gravel roof; wood floors; steam heat; cost \$13,000; L. R. Moss, Archt., Norfolk.

Va., Pulaski.—Methodist church let contract at \$17,700 to Hoback & Hufford, Pulaski, to erect building; Kinsport tapestry brick; Frank Stone, Archt. (Lately noted.)

W. Va., Logan.—Methodist Episcopal Church let contract at \$25,100 to A. C. Martin, Logan, to erect building; native stone used primarily in walls and trimmings. (Lately noted.)

CITY AND COUNTY

Fla., St. Augustine.—Barn.—City, Laurence Pomar, Clerk, let contract to James & Cray to erect barn; location not decided. (Noted in April.)

R. C., Camden.—Library.—City let contract at \$4994 to A. M. Sox, Columbia, S. C., to erect proposed Carnegie library.

R. C., Greenville.—Jail.—Greenville County Jail Com. let contract to Pauly Jail Building Co., St. Louis, for steel work, including cells, doors, window bars, locking devices, etc.; toolproof; Morris & Jameson, general contractors, Greenville. (Lately detailed.)

Tex., Jourdanton.—Jail and Sheriff's Residence.—County Commrs. have plans by and let contract to Southern Structural Steel Co., San Antonio, Tex., to erect jail and sheriff's residence; 45 ft. 5 in. by 51 ft. 10 in.; fireproof; Barrett specifications gravel roof; flat-slab reinforced concrete floor construction; steam heat to cost \$100; electric light, \$200; cost \$20,000 without mechanical equipment. (Lately noted.)

Va., Richmond.—Resthouse.—City let contract to J. E. Carr, 3508 E. Broad St., Richmond, to erect resthouse in Chimbarazo Park; 46x16 ft., 22 ft. high; ordinary construction; slate roof; gas radiators; wood floors; electric lighting; cost \$5370; Carneal & Johnston, Archts., Richmond. (Lately noted.)

Va., Roanoke.—City Hall.—Otis Elevator Co., main office New York, has contract to install elevators in city hall, for which King Lumber Co., Charlottesville, Va., is general contractor at \$218,900; Fry & Chesterman, Archts., Roanoke. (Previously detailed.)

W. Va., Richwood.—Municipal.—City, A. A. Williams, Recorder, has plans by and let contract to J. A. Tinscher, Richwood, to erect municipal building; 32½x110 ft.; 2 stories; ordinary construction; asbestos roof; basement floor concrete, other floors wood; steam heat; electric light; cost \$15,000. (Lately noted.)

DWELLINGS

Ala., Attalla.—Mrs. Mollie Cox Stowers let contract to J. M. Flood, Attalla, to erect dwelling; 10 rooms and bath; cypress shingle roof; 4 grades; electric lighting; cost \$1600 or \$1700; S. B. Smith, Archt., Gadsden, Ala.; address owner; Ben Stowers lately noted to erect dwelling. (See Machinery Wanted.)

Ala., Mobile.—Jos. Dacovich let contract to Armitage & Patterson, Mobile, to erect residence in Oakland Terrace; 8 rooms; 32x33 ft.; warm-air heat; Kellerstone exterior walls; Vulcanite shingle roof; hardwood, tile and cement floors; hot-air heat; electric lighting; cement sidewalks; cost \$8000; Downey & Deegan, Archts., Mobile.

D. C., Washington.—R. Y. Ferner let contract to J. F. Mill & Bro., Washington, to erect 2-story frame dwelling at 3709 Keokuk St.; cost \$5000; W. G. Guss, Archt., 2804 14th St. N. W., Washington.

Fla., Clearwater.—Pinellas Lumber Co., Clearwater, has contract to erect dwelling on North Fort Harrison Ave.; 2 stories; composition roof; cost \$5000; Lester Avery, Archt., Clearwater. Address contractor. (See Machinery Wanted.)

Fla., Gainesville.—Dr. J. H. Colson let contract to P. D. Prevatt, Gainesville, to erect 3 bungalows; 5 rooms each.

Fla., Lake Weir.—Charles Rheinauer let

contract to Melver & MacKay, Ocala, Fla., to erect residence; 2 stories.

Ga., Atlanta.—District Grand Lodge, No. 18, will erect frame dwelling at 161 N. Ashby St.; cost \$2925; A. D. Hamilton, Contr.

Ga., Atlanta.—J. M. Sullivan let contract to J. B. Eason & Son, Atlanta, to erect 2-story frame dwelling at 478 Greenwood Ave.; cost \$3750.

Ga., Atlanta.—Rhett & O'Beirne let contract to C. Shelverton, Atlanta, to erect 2-story brick-vener dwelling at 261 E. 4th St.; cost \$3600.

Ga., Atlanta.—Mrs. Clemmie Montag let contract to T. T. Flagler, Healey Bldg., Atlanta, to erect residence on Oakdale Rd., Druid Hills; 2 stories; hollow tile and stucco; cost \$10,000; 9 rooms; tile roof; oak and pine floors; hot-air heat, \$250; electric lights; Hentz & Reid, Archts., Candler Bldg., Atlanta. Address Contr.

Ga., Augusta.—Miss Mary C. Cuthbert let contract to Palmer-Spivey Construction Co., Augusta, to erect dwelling; 35x40 ft.; ordinary construction; Neponset shingle roof; wood floors; hot-water or hot-air heat; electric lighting; cost \$5200; C. L. Whaley, Archt., Augusta. (Lately noted.)

Ga., Augusta.—W. L. McCrary let contract to Woodward Contracting Co., 1011 Chronicle Bldg., Augusta, to erect dwelling at Henry and Fleming Sts., Northview; 2 stories; ordinary construction; tin shingle roof; wood floor; hot-air heat; electric light; cost \$7000; L. W. Woodward, Archt., 1011 Chronicle Bldg., Augusta. (Lately noted.)

Ga., Augusta.—C. P. Boardman let contract to Woodward Contracting Co., 1011 Chronicle Bldg., Augusta, to erect dwelling on Highland Ave.; 2 stories; ordinary construction; shingle roof; wood floor; steam heat; electric light; cost \$5200; H. T. E. Wendell, Archt., Augusta. Address Contr.

Ga., Augusta.—E. A. Frank let contract to A. J. Little, 542 Ellis St., Augusta, to erect dwelling about 37x66 ft.; ordinary construction; stained cypress shingle roof; wood floor; cost \$5500; hot-water heat, about \$425; electric lighting; nearly all subcontracts let; J. B. Story, Archt., Montgomery Bldg., Augusta. Address Contr. (Lately noted.)

Ga., Savannah.—R. L. Baugh, Dothan, Ala., let contract to Standard Investment Co., Savannah, to erect residence; 2 stories; cost about \$40,000; I. P. Crutchfield, Archt., Savannah.

Ga., Tifton.—Dr. J. L. Banks is reported to have let contract to C. V. Arnold, Tifton, to erect residence; brick veneer; slate roof; tile bathrooms; hardwood floors; hot-water heat; electric fixtures; cost \$7500.

Ky., Hickman.—Judge F. S. Moore let contract to L. N. Gregory, Hickman, to erect dwelling; 32x36 ft.; wood or metal shingle roof; hardwood floor; steam heat; electric light; cost \$3500; construction begun; address owner or contractor. (See Machinery Wanted.)

Ky., Lexington.—F. A. Bullock let contract to J. R. Tucker, Lexington, to erect residence at Main St. and Montelle Park; pressed brick; cost \$7000; Martin Geertz, Archt., Lexington.

Ky., Lexington.—A. D. Hughes let contract to Hendrick-Moore-Young Co., Lexington, to erect 8-room residence; cost about \$50,000.

Ky., Lexington.—C. B. Shaffer, Chicago, let contract to Hendricks-Moore-Young Co., Lexington, to erect brick and stone country home on McGrathiana stock farm; 14 rooms.

La., Lake Charles.—W. B. Williamson let contract to Platt & Volquardsen to erect residence; cost about \$9000.

Md., Baltimore.—Chas. Lipps let contract to P. P. Day, 163 Montebello Ave., Baltimore, to erect dwelling on Park View Ter. N. of Harford Rd.; 2½ stories; 28x32 ft.; frame; slate roof; steam heat; cost \$4800; Malcolm MacCallum, Archt., Baltimore.

Md., Baltimore.—E. W. Young let contract to Seybold & Sparklin, 502 Law Bldg., Baltimore, to erect dwelling at 3309 Carlisle Ave.; 2½ stories; frame; slate roof; furnace heat; cost \$4000; Childs & Sparklin, Archts., 502 Law Bldg., Baltimore. (Noted in March.)

Md., Govans.—W. J. Sneringer, Jr., 2339 N. Calvert St., Baltimore, let contract to Henry A. Knott, 1340 N. Eden St., Baltimore, to erect residence; 2½ stories; frame; electric lights; hot-water heat; cost about \$4000; A. Murray Myers, Archt., Govans.

Md., St. Helena.—S. Miller let contract to E. Eyring & Sons, 800 S. 3d St., Baltimore, to erect residence; 2 stories; frame; 8 rooms; cost about \$3000; Edw. Eyring, architect, 800 S. 3d St.

Mo., St. Louis.—Edward A. Faust let contract to Ratermann Building & Contracting

Co., 1943 St. Louis Ave., St. Louis, to erect addition to dwelling at Way and Portland Pl.; 60x30 ft.; fireproof; composition roof; tile reinforced floor; hot-water gas heater; electric light; cost \$35,000; T. P. Barnett Co., Archt., St. Louis; construction begun. (Lately noted.)

N. C., Edenton.—C. N. Griffin has plans by and let contract to J. A. Campbell, Edenton, to erect dwelling; 30x40 ft.; main building 2 stories, with 12x22-ft. L; mill construction; metal shingle roof; pine floors; no heating plant; cost \$4000. (Lately noted.)

N. C., Edenton.—R. G. White has plans by and let contract to F. F. Muth, Edenton, to erect bungalow; 35x50 ft.; mill construction; asbestos shingle roof; hardwood floors; heating not decided; cost \$4000; construction begun.

N. C., High Point.—Bascum Hoskin let contract to B. F. Montgomery & Son, High Point, to erect dwelling; 32x40 ft.; mill construction; cedar shingle roof; wood floors; cost \$3500. (Lately noted.)

Okl., Chandler.—Roy V. Hoffman let contract to erect 2 dwellings; construction under supervision of H. W. Steer.

S. C., Walterboro.—I. M. Fishburne has plans by and let contract to W. A. Stewart, Walterboro, to erect bungalow; 8 rooms; mill construction; tin shingle roof; pine and hardwood floors; fireplaces; electric lighting; cost \$3500. (Lately noted.)

S. C., Spartanburg.—A. B. Calvert let contract to J. M. Crawford, Spartanburg, to erect bungalow on Hydrick St.; excavation begun.

S. C., Spartanburg.—John B. Cannon, Cash. Bank of Spartanburg, let contract to erect bungalow on S. Church St.; cost \$3000.

Tenn., Memphis.—Ernest C. Cool let contract to L. Guth, Memphis, to erect residence; 1 story; 7 rooms; frame and stucco; cost about \$4000.

Tenn., Memphis.—Edw. Lindsey let contract to Ed. Miles, Memphis, to erect residence; 2 stories; 9 rooms; brick veneer; garage in rear; cost, including heating and wiring, \$5500.

Tenn., Nashville.—Stewart S. Fleming, Columbia, Tenn., let contract to T. J. Christman, Nashville, to erect residence; 2 stories; brick; cost about \$15,000. Mr. Christman let following subcontracts: Foundation and concrete, M. A. Lightman & Co.; cut stone, Nashville Cut Stone Co.; sheet metal and tiling, H. E. Farmer; plumbing and heating, T. J. Mooney & Co.; hardwood flooring, Harvey H. Pride; brick work, A. W. Hutchison; iron work, Atlas Machine Co.; all of Nashville; C. A. Ferguson, Archt., Nashville.

Tenn., Nashville.—Hermitage Realty Co., J. H. Colley, Prest., let contracts as follows to erect 15 to 20 stucco bungalows; composition shingle roof; hot-air heat; Uncle Hiram Roofing Co., concrete and roofing; C. W. McClanahan, carpenter work; Cooper & Ferguson, plaster and stucco; Schuler Bros., furnace; H. E. Farmer, tile work; H. H. Pride, oak floor; Wm. A. Roache, plumbing; Herbrick & Lawrence, electric work; all of Nashville; C. K. Colley, Archt., 33-40 Life & Casualty Bldg., Nashville. (Lately noted.)

Tex., Cleburne.—S. B. Norwood, Prest. of National Bank of Cleburne, let contract to H. L. Chambliss, Cleburne, to erect \$8000 residence on Prairie Ave.

Tex., Dallas.—E. G. De Shung, 1505 S. Akard St., let contract to Jackson & Morris, Dallas, to erect 6-room residence; cost about \$3000; Brickey & Brickey, Archts., 926 Busch Bldg., Dallas.

Tex., El Paso.—Robt. L. Holliday let contract to J. E. Morgan, El Paso, to erect 7-room residence at Gold & Elm Sts., Manhattan Heights; cost \$5000.

Tex., Gainesville.—Ernest E. McAnelly, 1301 Southwestern Life Bldg., Dallas, let contract to erect 3 frame bungalows near Gainesville; 24x32 ft.; ordinary construction; shingle roof; wood floor.

Tex., Palmer.—L. B. Griffith, Cashr. of Citizens' Bank, let contract to G. M. Jeffers, Ferris, Tex., to erect dwelling.

Va., City Point.—E. I. Du Pont de Nemours Powder Co., Wilmington, Del., let contract to erect 100 dwellings at Hopewell in addition to those nearing completion.

Va., Richmond.—T. J. Younglove will erect 2-story brick dwelling at 416 N. 34th St.; cost \$3050; Spence & Mills, Contrs., Richmond.

Va., Richmond.—J. B. Elam will erect two 2-story brick dwellings at 725 W. Cary St.; cost \$8000; Davis Bros., Contrs.; Wm. B. Newell, Archt.; both of Richmond.

W. Va., Parkersburg.—Mr. and Mrs. Wm. Warren let contract to Jas. F. McCoy, Route

8, Parkersburg, to erect dwelling; 6 rooms, bath, reception hall and basement; 2 stories; ordinary construction; slate roof.

GOVERNMENT AND STATE

Ala., Gadsden.—Federal.—Treasury Dept. let contract at \$3500 to Gilbert White, New York, to decorate courtroom in Federal Bldg.

Ky., Louisville.—Postoffice.—Harry Dunekake, 31st St. and Broadway, let contract to Tobe Greiner Building & Contracting Co., 1003 E. Broadway, Louisville, to erect post-office substation at 31st St. and Broadway; ordinary construction; metal roof; wood floor; hot-air heat; cost \$5000; Arthur Tafel, Archt., Coleman Bldg., Louisville. (Lately noted.)

HOSPITALS, SANITARIUMS, ETC.

Fla., Tampa.—Board of Public Works let contract at \$6773 to construct nurses' quarters at Gordon Keller Memorial Hospital; A. L. Shaw, Archt., American National Bank Bldg., Tampa. (Lately noted.)

Fla., Tampa.—City let contract at \$6773 to Bates & Hudnell, Tampa, to erect nurses' quarters for Gordon Keller Hospital; 32x100 ft.; ordinary frame construction; A. L. Shaw, Archt., Tampa. (Lately noted.)

Mo., St. Joseph.—Selden-Breck Construction Co., Fullerton Bldg., St. Louis, Gen. Contr., to erect Noyes Memorial Hospital, let following subcontracts: Excavation, Michael Whalen; angles, St. Joseph Structural Steel Co.; frames and sash, L. H. Batsell & Sons; cement, Mannan Smith Supply Co.; sand, Pioneer Sand Co.; common brick, St. Joseph Press Brick Co.; cut stone, Pfeiffer Stone Co.; all of St. Joseph; terra-cotta, St. Louis Terra-Cotta Co., St. Louis; tile floors, American Mosaic & Tile Co., Louisville, Ky.; plans by Rudolph Meier, Lincoln Bldg., St. Joseph, and Richard E. Schmitt, Garden & Martin, associates, 104 S. Michigan Ave., Chicago, call for structure 4 stories and basement; 45x150 ft.; fireproof; cost \$85,000. (Previously noted.)

Okl., Choctaw.—Dept. of Interior, Washington, D. C., let contract at \$250,000 to \$300,000 to Lovell-Kain Co., Minneapolis, Minn., to erect frame hospital quarters, laundry, lavatory, power-house, camp quarters, water and sewer systems and electric-light plant at Choctaw Sanatorium. (Lately noted.)

HOTELS

Fla., St. Augustine.—Monson Hotel, Chas. E. Young, Sr., Mgr., let contract to W. A. Bostick, St. Augustine, to erect addition to hotel; 50 rooms; fireproof; tile roof; wood floor; tile baths; F. A. Henderich, Archt., St. Augustine. (Lately noted.)

MISCELLANEOUS

Ala., Mobile.—Grandstand.—Gulf Coast Fair, City Bank & Trust Bldg., let contract to Drew & Davis to erect grandstand; 100 ft. long; cost \$5000; Geo. B. Rogers, Archt., Van Antwerp Bldg., Mobile. Address Archt. (Previously noted.)

Ark., Little Rock.—Stable.—Wells, Fargo & Co. Express, 118 Main St., let contract to I. B. Davis, Little Rock, to erect stable; 50x115 ft.; 2 stories; slow-burning construction; Barrett specification roof; cost \$10,000; electric wiring, \$150; A. P. Morrison, Archt., State Bank Bldg., Little Rock; construction begun; address L. H. Bradley, Wells, Fargo & Co., Little Rock. (Lately noted.)

Fla., Jacksonville.—Undertaking.—Marcus Conant let contract to Buckland & Fitchner, Jacksonville, to remodel and erect addition to building for undertaking establishment; one section 24x40 ft., other 34x55 ft.; 2 stories; ordinary brick and hollow tile walls; Greendale rug face brick; extend hot-air heating plant; hand power elevator, 2000 lbs. capacity; cost \$10,000; Mark & Sheftall, Archts., Jacksonville; construction begun. (Lately noted.)

SCHOOLS

Ark., Batesville.—Special Dist. No. 1, J. C. Fitzhugh, Chrmn. Building Comm., let contract to L. J. Sharp, Batesville, to erect school building on Vine St.; 42x86 ft.; mill construction; slate roof; concrete basement, double pine floors first and second stories; heating plans not decided; cost \$3000; electric lights \$150; construction begun. (Lately noted.)

Ark., Harrison.—Trustees let contract at \$6991 to McIneyolds, Ritchey & Dally, Harrison, to erect Woodland Heights School.

Fla., Fellsmere.—School Board let contract to A. F. Sanders, Fellsmere, to erect school building; 60x140 ft.; ordinary brick and wall tile construction; paroid roofing or equal;

wood floors; Detroit combination heating; city lighting; cost \$30,000; F. H. Trimble, Archt., Fellsmere. (Lately noted.)

Ga., Atlanta.—Board of Education let contract to erect East Atlanta School at cost of \$12,500, but rejected bids to erect West End Park School, cost \$10,000; Howell Station, cost \$5000; Milton Avenue, cost \$5000. (Lately noted.)

Ga., Ellaville.—City let contract to Little & Phillips, Cordele, Ga., to erect school building, including plumbing and wiring; 6 classrooms and auditorium; brick; tin roof; hot-air heat; cost about \$10,000; Jas. J. Baldwin, Archt., Hubbard Bldg., Anderson, S. C.; address contractors. (Lately noted.)

La., Colfax.—School Board let contract to General Construction Co., Pine Bluff, Ark., to erect school building; 2 stories and basement; 70x80 ft.; ordinary construction; metal roof; cost \$14,500; hot-water heat, \$800; electric lighting, \$100; Joe Carver, Archt., Box 136, Colfax; construction begun. (Noted in April.)

La., West Monroe.—School Board let contract to Caldwell Bros., Abbeville, La., to erect school; 139x119 ft.; ordinary construction; asphalt shingle roof; wood floor; cost \$21,500; \$4800 heating plant; \$2300 lighting; Smith & Barthels, Archts., Monroe, La. (Lately noted.)

Mo., Kansas City.—Board of Education let contract at \$22,357 to Arthur G. Harper, Kansas City, to erect addition to Greenwood School; 4 classrooms; will also erect retaining wall on west of McCoy school grounds. (Lately noted.)

N. C., Old Fort.—City let contract to Jordan-Munn Construction Co., Greenville, S. C., to erect school; brick and stone; steam heat; cost \$15,000; Benton & Moore, Archts., Wilson, N. C. (Contract lately noted let to Nunn Construction Co.)

Tenn., Chattanooga.—Grammar School Board let following contracts for schools: S. M. Wilson, Chattanooga, at \$5299 to erect Harrison school; P. O. Rogers, Chattanooga, at \$514.54 for Avondale septic tank and \$397.24 for East Chattanooga septic tank; Park-Grimes Co., Chattanooga, at \$1146 for East Chattanooga toilet-room; D. J. Murphy, Chattanooga, at \$1128 for plumbing East Chattanooga school; opens bids May 27 to erect Fort Cheatham school according to plans by Chandler & Campbell, 720 Hamilton National Bank Bldg., Chattanooga, and revised bids for Silverdale school according to plans by Chas. E. Bearden, Chattanooga. (Lately noted.)

Tenn., Clinton.—A. C. Duggins, Supt., let contract at \$35,538 to Luther Powers, Knoxville, to erect 7 school buildings in Anderson county; ordinary construction; gravel roof; wood floors; hot-air heat; electric lighting; Albert B. Baumann, Archt., Knoxville. (Lately noted.)

Tenn., Grand Junction.—City, F. H. McClellan, Recorder, let contract to J. R. Johnston, Jackson, Tenn., to erect school on Tennessee St.; 64x90 ft.; mill construction; metal shingle roof; wood floor; cost \$9200; J. F. Parish, Archt., Jackson. (Lately noted.)

Tex., Gainesville.—State Board of Control let contract to Tom Berentine, Gainesville, to erect 3 five-room bungalows at Girls' Training School farm for officials; girls' department to consist of 5 two-story brick buildings of 15 rooms each; E. E. McAnnally, Archt., Southwestern Life Bldg., Dallas. (Lately noted.)

Tex., Lawrence.—School Board let contract to G. C. Taylor, Blooming Grove, Tex., to erect school; 2 stories; gravel roofing; Glenn Bros., Archts., Fort Worth, Tex. (Lately noted.)

Tex., Sadler.—School Board let contract Maxwell-Stewart Construction Co., Wichita Falls, Tex., to erect 6-room brick school; cost about \$10,000. (Previously noted.)

Tex., San Antonio.—Bexar county let contracts as follows: To erect training school for boys, about 12 miles from San Antonio; about 80x60 ft.; 2 stories and subbasement; fireproof; reinforced concrete, brick and tile; gravel roof; Walsh & Burney, San Antonio, at \$22,372 for construction; Eagle Plumbing & Heating Co., San Antonio, at \$2750 for plumbing and heating; Martin Wright, San Antonio, at \$197 for electrical work; Seutter, Adams & Adams, Archts., Gibbs Bldg., San Antonio. (Lately noted.)

Tex., Woodboro.—School Board let contract to Taylor Building Co., Fort Worth, Tex., to erect school; 2 stories; 6 rooms; 68x76 ft.; gravel roof; cost \$10,000; R. L. Pierce, Archt., Central Office Bldg., San Antonio. (Lately noted.)

STORES

Ala., Bessemer.—Dr. J. C. Curry let contract Central Lumber Co., Bessemer, to erect store buildings; 50x100 ft.; tar and gravel roof; cement floor; gas lighting; cost \$5000; W. E. Bennis, Archt., Bessemer. (Lately noted.)

Ark., Dardanelle.—Miss Lucy Thomas and J. M. Nolen let contract to S. W. McKenzie, Dardanelle, to erect business building; brick; 40x70 ft.; will be occupied by W. A. Jackson.

Ark., Lepanto.—Marcom Bros. let contract to erect store; 76x100 ft.; ordinary construction; composition roof; brick floor; concrete sidewalk; cost \$6000; L. M. Weathers Co., Archt., Memphis, Tenn. (Lately noted.)

Ark., Swift.—J. G. Smith, S. E. Dukes and S. A. Driver let contract to J. F. Young, Batesville, Ark., to erect 4 brick stores; fireproof; frontage 100 ft.; completion in 90 days.

Fla., Daytona.—W. W. Carter let contract to A. Van de Vord, Daytona Beach, Fla., to erect business building; 28x75 ft.; 2 stories; brick and cement block; composition roof; wood floor; cost \$5000; D. F. Fuquay, Archt., Daytona Beach, Fla.

Fla., Jacksonville.—H. S. Walker, 403 Main St., Jacksonville, has contract to erect store and apartment building at 403 Main St.; 35x105 ft.; ordinary construction; rubber roof; wood floor; electric light; W. M. Marsh, Archt., 403 Main St., Jacksonville; address contractor. (Lately noted.)

Ga., Atlanta.—Marbut & Minor will erect 2-story mercantile building at Flat Shoals and Glenwood Aves.; cost \$12,000; Kalb & McCauley, Contrs., Atlanta.

Ga., Atlanta.—Jacobs Pharmacy Co. let contract to De Leon Construction Co., Walton Bldg., Atlanta, to resume construction of store and apartment building at Peachtree and Roswell Rds.; 40x120 ft.; ordinary construction; composition roof; wood floor; electric light; \$100, sidewalks and vault lights; cost \$9000; W. C. Powell, Archt., Atlanta. (Lately noted.)

Ga., Kirkwood.—Sutherland Realty Co. let contract to R. M. Abernathy, Peters Bldg., Atlanta, to erect store building; 1 story and basement; brick veneer; press brick; tile and gravel roof; plate-glass fronts; cost about \$4000; Lella Ross Wilburn, Archt., 305 Peters Bldg., Atlanta.

Ga., Savannah.—A. J. Cohen of J. T. Cohen's Sons let contract to W. A. Chafee, Savannah, to erect building on W. Broad St.; 35x170 ft.; main entrance alcove type, with 3 plate-glass windows on either side; lower floor for store; upper floor for apartments; cost several thousand dollars.

Mo., St. Louis.—Lindell Fair Grounds Realty Co. let contract to erect store and apartment-house. (See Apartment-houses.)

N. C., Kinston.—Quinn & Miller let contract to erect 3-story building at Queen and Caswell Sts.; cost \$20,000; 48x136 ft.; ordinary construction; tin roof; cement flooring; city lights; electric elevators to cost about \$1000; Blalock Bros., Archts. and Contractors, Kinston; address owners.

N. C., Winston-Salem.—A. S. Hanes let contract to J. E. Kenerly, Winston-Salem, to erect brick store building on W. 5th St.; 42x90 ft.; mill construction; 1 story and basement; tin roof; electric lights; cost \$6000; Joel R. Hill, Archt., Winston-Salem. (Lately noted.)

Okl., Morris.—Ed. I. Ayres, Muskogee, Okla., let contract to erect business building; frontage 40 ft.

Tenn., Knoxville.—Capt. W. W. Woodruff let contract to J. M. Dunn & Son, Knoxville, to remodel building at 619 Gay St. for jewelry store, etc.; 21x150 ft.; ordinary construction; tile and maple floors; cost \$4000 to \$5000; steam heat, about \$500; A. B. Baumann, Archt., Knoxville; address Hope Bros., Inc., Knoxville.

Tex., Cleburne.—A. C. White and H. C. Gresham let contract to erect brick building; 50x102 ft.

Tex., Galveston.—Galveston Brewing Co. let contract to Coyle Bros., Galveston, to erect business and apartment building; brick; 2 stories; 43x120 ft.; gray pressed brick exterior facing; Stowe & Stowe, architects, Galveston. (Lately noted.)

Tex., Snyder.—George W. Harris and J. J. Koonsman let contract to erect 2 brick store buildings.

W. Va., Huntington.—Henry Meadows is reported to have let contract to G. Watts, Huntington, to erect building; 3 stories above basement; brick and steel; lower floor for store; upper floors, apartments.

W. Va., St. Mary's.—Mrs. Ella Aukrom let contract to G. W. Gatrell, St. Mary's, to

erect store and office building; 73x90 ft.; 2 stories; ordinary construction; slag roof; wood floor; cost \$10,000; R. H. Adair, Archt., Parkersburg, W. Va.; construction begun; address contractor.

THEATERS

S. C., Greenville.—Greenville Amusement Co. let contract to J. H. Jordan & Co. to erect moving-picture theater; 43x108 ft.; brick and heavy timber construction; pitch and gravel and tin roof; wood and tile floors; cost \$12,000; 2-pipe vapor vacuum heat, \$600 to \$1000; lighting, \$500 to \$1000; H. Olin Jones, Archt., Greenville; construction begun. (Lately noted.)

W. Va., Moundsville.—M. A. Sybert, Mgr. Park Theater, let contract to Thos. Shimp & Son, Moundsville, to erect addition to theater on Jefferson Ave.; seating capacity 800. (Lately noted.)

WAREHOUSES

N. C., Charlotte.—J. J. Breen Co., Charlotte, has contract at \$4587.59 for plumbing in building for Mercantile Development Co., for which Travers Wood Co., Richmond, has

general contract; total cost about \$500,000; Francisco & Jacobus, Archts., 200 Fifth Ave., New York. (Others contracts and full details lately noted.)

Tex., Galveston.—Southern Products Co., Dallas, let contract to Eubank & Dibreil, 201 American Insurance Bldg., Galveston, to erect cotton concentration plant; 200x70 ft.; mill construction; corrugated-iron roof; cost \$50,000; subcontracts (not let) include lumber, corrugated iron and plumbing; address contractors. (Previously noted.)

Tex., Galveston.—Galveston Wharf Co. let contract to Stone & Webster Engineering Corporation, 147 Milk St., Boston, to erect skewed double-deck cotton and merchandise storage warehouse; 85x120x327 ft.; fireproof construction; composition roof; concrete floors; cost \$200,000; Ford, Bacon & Davis, Engrs., 921 Canal St., New Orleans. (Lately noted.)

Tex., Houston.—Leon Frede, La Grange, Tex., let contract to John Stadler, 1120 Chenevert St., Houston, to erect warehouse at Richey and Sterrett Sts. for Patrick Transfer & Storage Co.; 100x100 ft.; ordinary construction; gravel roof; wood floor; cost \$5000; construction begun. (Lately noted.)

RAILROAD CONSTRUCTION

RAILWAYS

Ark., Cove.—J. P. Harpending and others are reported contemplating construction of a railroad between Cove, Ark., and the Narrows, Okla.

Ala., Fairhope.—The People's R. R., E. B. Gaston, Pres., at Fairhope, proposes an extension from Robertsdale to Silver Hill, 3 mi.

Fla., Fort Myers.—James Stewart & Co., 30 Church St., New York, are reported interested in plans to build the Fort Myers, Marco Bay & Miami R. R. from Fort Myers to Naples, Marco Bay and Miami, Fla., 150 mi. Name may be changed if a route via Ford Lauderdale is adopted. W. J. Hillands, R. S. Hall and S. P. Hollinrake of Ocala, Fla., and James R. Collins of Jacksonville, Fla., are trustees. W. B. Clay, Arcadia, Fla., is Ch. Engr.

Ga., Lumber City.—Ocmulgee Valley R. R. Co., authorized capital \$100,000, is chartered to build a line from Lumber City to Jacksonville, Ga., 22 mi., all in Telfair county. Incorporators, C. F. Smith and J. H. Wilcox of Lumber City; J. O. Bland, W. A. Clark, R. N. Dopson, J. C. Wilcox, F. R. Mann and Guy C. Lane of Jacksonville; T. J. Smith of McRae, Ga., and R. A. Smith of Lafayette, Ind. C. F. Smith is Gen. Mgr. and John C. Work Ch. Engr. at Lumber City.

Ga., Springfield.—Midland Ry. Co. has been granted charter asked to build a line from Savannah northwest to Milledgeville, Ga., about 150 mi.; authorized capital stock, \$1,000,000. Construction reported in progress near Pinecon, whence the line will run, it is said, via Statesboro, Swainsboro, Wrightsville and Sandersville, in addition to the two terminal points, besides Springfield. The incorporators include H. O. Buman of Savannah; W. M. Exley, J. D. Johnson, W. H. Webb, L. M. Mikel, O. D. Kessler, K. I. Helme, C. M. Leitner and C. A. Johnson of Edinham county, of which Springfield is the county seat, and J. A. Davis of Burke county, of which Waynesboro is the county seat. George M. Brinson of Springfield is reported interested.

Ky., South Portsmouth.—Chesapeake & Ohio Ry. announces that it has approved the award of contracts for the construction of the bridge over the Ohio River and the new line about 30 mi. long from near Portsmouth to Waverly, O., connecting there with the Norfolk & Western Ry. for Columbus. Estimated cost of construction including the bridge, \$4,500,000. M. J. Caples is V.P. in charge at Columbus, O. (See Manufacturers Record, April 22.)

La., New Orleans.—Railroad yards and terminal tracks are to be built in connection with the new dock board grain elevator. Address E. M. Loeb, Pres. New Orleans Port Commission.

N. C., Sanford.—Atlantic & Western Ry. is reported surveying for an extension between Benson and Mount Olive, N. C. H. P. Edwards, Sanford, is Supt.

Okl., Bristow.—St. Louis capitalists are reported to have begun survey for a railroad from Bristow to Drumright, Okla., and will make survey also from Bristow to Okmulgee. The engineering corps consists of W. Matthews, B. W. Hebard, Oliver Gaertner, Leo

E. Read, E. C. Read and J. Mathews, all of St. Louis.

S. C., Kingstree.—The railroad built by the Trullit Lumber Co. of Norfolk, Va., from Kingstree to Fowler, 8 mi., will, it is reported, be extended to Nesmith.

Tenn., Greenville.—Contractors are reported to have begun preliminary construction at Rader, Tenn., on the Carolina, Greenville & Northern R. R., which is to be an electric interurban line from Kingsport via Greenville to Newport, Tenn., about 75 mi. Leroy Park, field agent, has made investigation concerning feasibility of suggested extension to both Bristol and Knoxville. H. S. Reed, 205 Grand Bldg., Los Angeles, Cal., is Pres.; James L. Callahan, 111 Broadway, New York, V.-P.; Kirby Thomas, 43 Exchange Pl., New York, Gen. Mgr.; A. M. Blauvelt, 61 Broadway, same city, is Secy.; F. A. H. Kelly, Greenville, is Ch. Engr.

Tex., Austin.—Survey is reported made for the construction of an interurban railway between Austin and Waco, about 100 mi. J. F. Strickland of Dallas and others are interested.

Tex., Beeville.—C. O. Williams of Corpus Christi, Tex., is reported interested in a plan to build a railroad from Beeville via Cadis and Oakville to Three Rivers, Tex., on the San Antonio, Uvalde & Gulf R. R., about 25 mi.

Tex., Dallas.—Mayor Henry D. Lindsay, Alex. Sanger and other Dallas business men are interested in a movement to secure the construction of a railroad from Denton to Krum, Tex., 7 mi., to connect the Missouri, Kansas & Texas Ry. and the Santa Fe system.

Tex., Houston.—Franklin Watson and W. N. Vinton of Columbus, O., have, it is announced, taken over the holdings of the Beaumont-Houston Interurban Ry. Co. and will form a construction company to build the line. Application for a charter with \$300,000 authorized capital will be made. J. H. McCracken of Houston will be Gen. Mgr.

Tex., Midland.—The railroad projected by W. L. Carville of Dallas, Tex., and T. J. O'Donnell of Sweetwater and Midland, Tex., will run from Midland north via Andrews, Seminole and Brownfield to some point on the Pecos & Northern Texas Ry. of the Santa Fe System. Will be ready to start work within 60 days. Route lies through level prairie country; no bridges of any length required. Line will be from 65 to 150 mi. long. Company to be chartered.

W. Va., Princeton.—Tracklaying has begun on the electric railway between Princeton and Bluefield, 12 mi. S. J. Evans, Pres. of the Princeton Power Co., which is building the road, says that the work will be steadily continued to completion.

Sternberg Motor Trucks.

Advantages in flexibility and mechanical superiority claimed for Sternberg automatic dump trucks in transporting loose materials are given in a large folder issued by the Sternberg Motor Truck Co., West Allis, Milwaukee, Wis. Sternberg trucks are manufactured in 5 and 7-ton sizes, and are of the water-cooled, four-cylinder, gasoline-motor, chain-drive type.

MACHINERY, PROPOSALS AND SUPPLIES WANTED

Manufacturers and others in need of machinery or supplies of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery or supplies needed we will make their wants known free of cost, and in this way secure the attention of manufacturers and dealers throughout the country. The Manufacturers Record has received during the week the following particulars as to machinery and supplies wanted.

"WANTS"

Air Compressor, etc.—Tennessee Valley Motor Co., Huntsville, Ala.—Air tank and compressor, complete with hose.

Bags (Paper) Manufacturers.—Hugh A. Barnard, Houstonville, N. C.—To correspond with manufacturers, view to having patented paper bags manufactured.

Basket Machinery.—G. W. Simmons Co., 88 S. Front St., Memphis, Tenn.—Die machine for cutting tops and bottoms of hamper and Climax baskets; also St. Joe or Saranac hamper basket machine; all second-hand, good condition.

Boiler.—Mendows & Staton, Williamston, N. C.—Second-hand 80 to 100 H. P. boiler; to pass inspection.

Boilers.—Port Commrs., Ernest M. Loeb, Pres., 200 New Orleans Court Bldg., New Orleans, La.—Bids until June 9 for 3 horizontal return tubular boilers with settings, breeching and appurtenances; installed in cotton warehouses and terminal, located on east bank Mississippi River between Valence and Sonlat Sts.; plans and specifications on file with Ford, Bacon & Davis, 921 Canal St., New Orleans; full sets furnished for \$35.

Bottles (Glass).—Virginia Product Co., 23 Cumberland St., Norfolk, Va.—Names and addresses of manufacturers of yeast-powder bottles.

Brass, Copper, etc.—Bureau of Supplies and Accounts, Navy Dept., Washington, D. C.—Bids until June 8 for delivering brass, copper and condenser tubes at Navy-yard, Portsmouth, N. H. Apply for proposals to the navy pay office, Portsmouth, or to Bureau.

Bridge Construction.—Page County Commrs., Luray, Va.—Bids until June 10 to construct steel bridge 111 ft. long and alternate bids on reinforced concrete bridge 105 ft. long over Hawksbill Creek at Willow Grove Mill, near Luray; plans and specifications on file at Clerk's office at Luray and office State Highway Com., Richmond; further information furnished by G. P. Coleman, State Highway Commr., Richmond.

Bridge Construction.—Greenville County Commrs., Greenville, S. C.—Bids until June 8 to furnish material, labor and constructed complete (stone and sand to be furnished by county) 16-ft. span concrete bridge near Greer; specifications on file with W. H. Willimon, Supvr.

Bridge Construction.—S. W. Ames, care Bank, Keller, Va.—Bids June 3 to construct Accomac county bridge across Occoanock Creek, 1 1/2 mi. from Belle Haven; 612-ft. structure, with 16-ft. roadway; superstructure, wooden beam spans; substructure (to include tearing down old structure), piles and sheathing—alternate bids on untreated piles; plans and specifications at office Clerk of Circuit Court and G. P. Coleman, State Highway Commr., Richmond, Va.; blueprints obtainable from Childrey Co., Richmond, at 9 cents and postage.

Bridge Construction.—Swain Highway Commission, Bryson City, N. C.—Bids until June 7 to construct 300-ft. bridge across Tuckasee River; separate bids on steel or concrete structure. For further information apply T. M. Howerton, Engr.

Bridge Construction.—Bids at Woodstock, Va., June 7, to build bridge across north fork of Shenandoah River between Warren and Shenandoah counties, 2 mi. from Strasburg; structure about 239 ft. long, 16-ft. roadway; superstructure, approaches and two 115-ft. 6-in. spans; substructure, concrete; plans and specifications at offices of Clerks of Circuit Court, Warren county (Front Royal), and Shenandoah county (Woodstock), and of State Highway Com., G. P. Coleman, Commr., Richmond, Va.; blueprints obtainable from Childrey Co., Richmond, 45 cents and postage.

Bridge Construction.—Norfolk County Com. of Roads and Bridges, 401 Commercial Bldg., Portsmouth, Va.—Bids until May 27 to construct pile bridge over Paradise Creek in Western Branch Dist.; plans and specifications on file with Com.; R. B. Preston, Engr.

Building Materials.—Pinellas Lumber Co., Clearwater, Fla.—Composition and galvanized roofing, shingle stain, plaster, sash and doors.

Castings.—See Gate Manufacturing Parts.—John T. Walston.

Chocolates Materials.—Angelina De Calvani, Miranda a Maderero 96, Caracas, Venezuela.—Addresses of manufacturers of colored fancy papers, gelatine papers and all materials for manufacturing small chocolates, fancy boxes, etc.

Clothing, etc.—Bensussan, Sides & Co., Salonique, Greece.—Prices on clothing, cloth and novelties for men; woolen cloth (half wool and all wool); shoes for soldiers; cartridge belts and other belts, and general military supplies; view to representation; send samples.

Coal.—U. S. Postoffice, office Sherlock Swann, Custodian, Baltimore, Md.—Bids until June 1 to supply building with 1500 tons bituminous coal during fiscal year ending June 30, 1916; specifications and proposal blanks obtainable from Custodian.

Contractors' Equipment.—R. E. Gilmore, Box 417, Post, Tex.—To correspond with manufacturers of house-raising, moving and shoring equipment.

Cotton Goods.—See Hosiery, etc.—John Murray.

Cotton (Raw).—See Metals, etc.—Luigi Aubert.

Cotton (Sail) Cloth.—Henry Massart, C. E., 15 E. Fayette St., Baltimore, Md.—Names and addresses of sail cloth manufacturers prepared to handle quickly an order for 1,000,000 sq. yds. sail cloth; for export.

Cotton Glove Materials, etc.—Luigi Aubert, Via Vassalli Eandi 32, Torino, Italy. Interested in "Cotton texture and silked cotton to make ladies' gloves, and relative poussoir, either of celluloid and metal, or only metal." Send samples and prices (possibly) c. l. f. Genoa.

Crane.—Sewerage and Water Board, F. S. Shields, Secy., New Orleans, La.—Bids until June 4 to furnish and erect 15-ton traveling crane in drainage pumping station No. 6; specifications and blank proposal forms obtainable from Board; Geo. G. Earl, Gen. Supt.

Crane (Hand).—Tennessee Valley Motor Co., Huntsville, Ala.—Hand crane on wheels.

Cranes.—Port Commrs., Ernest M. Loeb, Pres., 200 New Orleans Court Bldg., New Orleans, La.—Bids until June 9 for 15 or more electric traveling cranes, 2 transfer cranes, 1 crane transfer and erection cotton warehouses and terminal on east bank Mississippi River between Valence and Sonlat Sts.; plans and specifications on file with Ford, Bacon & Davis, 921 Canal St., New Orleans; full sets furnished for \$35.

Creosote.—Geo. Kilpatrick, Albany, Ga.—Prices on refined creosote.

Dam.—City of Temple, Tex., J. T. Martin, Secy.—Bids until June 8 on material and construction of gravity dam across Leon River for connection water-works; plans and specifications with City Engr. and obtainable for \$3.

Dredging.—U. S. Engr.'s Office, 815 Witherspoon Bldg., Philadelphia, Pa.—Bids until June 21 for dredging in Delaware River, opposite Port Richmond coal piers, Philadelphia harbor.

Earthwork.—Commrs. Burleson County Improvement Dist. No. 1, R. S. Newsom, Chrmn., Caldwell, Tex.—Bids until June 26 to construct about 360,000 cu. yds. earthwork in levees and small amount in drain ditches; plans and specifications on file in offices County Clerk at Caldwell and John K. Parker at Bryan, and may be obtained from J. C. Nagle, Engr., Austin, for \$5.

Electrical Equipment.—Post Power Co., Post, Tex.—Prices on six 2-light iron poles, 8-ft. spread, 15 ft. to lamps from ground, with 22-in. reflectors for 100-watt multiple lamps; 950 ft. 2-conduit cable for installation in ground, 110 volts.

Electrical Equipment.—Mrs. Mollie Cox Stowers, Attalla, Ala.—Prices on electrical equipment for dwelling.

Electrical Equipment.—O. E. Fink, Middletown, Md.—Prices on electrical equipment for store and dwelling.

Electric Furnaces, etc.—Bureau of Supplies and Accounts, Navy Dept., Washington, D. C.—Bids until June 22 for delivering at Navy-yard, Mare Island, Cal., etc., naval supplies as follows: Soda ash, white ash, Douglas fir, pipe fittings, flour in bags and tins, electric furnaces, steering gear, steering telegraph indicator, incandescent lamps, rivet machines, motors, raw linseed oil, pine tar oil, mercuric oxide, brass pipe, circulating pump, Indian red, steel, docking electric telegraphs, turpentine, metallic and white oxide zinc. Apply for proposals to navy pay office, San Francisco, or to Bureau.

Electrical Machinery.—Henderson Light & Power Co., Greenville, Ala.—400 K. W. A. C., 60-cycle, revolving field generator exciter switchboard, etc.; second-hand, good condition and cheap.

Electric Generator.—Tennessee Valley Motor Co., Huntsville, Ala.—Electric generator, alternating current.

Engines.—See Road Machinery.—E. L. Sheldon.

Engines (Gasoline, Portable).—John J. Carlin, 215 St. Paul St., Baltimore, Md.—To correspond with manufacturers of portable gasoline engines, 1 1/2 H. P., to be attached to circular saw, concrete mixer, suction pump, etc.

Fencing.—Mrs. Mollie Cox Stowers, Attalla, Ala.—Prices on yard fencing.

Fixtures (Bathroom).—O. E. Fink, Middletown, Md.—Prices on bathroom fixtures for store and dwelling.

Fixtures (Bathroom).—Mrs. Mollie Cox Stowers, Attalla, Ala.—Prices on bathroom fixtures for dwelling.

Fixtures (Store).—O. E. Fink, Middletown, Md.—Prices on glass and showcases.

Flooring (Red Oak).—L. N. Gregory, Hickman, Ky.—Prices on plain red oak flooring and select red oak finish for \$35.00 dwelling.

Flour Mill Machinery.—Arthur L. Seay, Shores, Va.—Opens bids from June 1 to 10 on new bolts, belts, wheat-cleaning machinery, new feeders and middlings mill.

Forgings.—See Machine Tools, etc.—Bureau of Supplies and Accounts.

Fountains (Drinking).—J. L. Boyd, Port Arthur, Tex.—Names and addresses of public drinking fountain manufacturers.

Gasoline Machinery.—Zeno King, Mexia, Tex.—Data and prices on machinery for manufacturing gasoline.

Gate Manufacturing Parts.—John T. Walston, Automatic Gate Co., Box 342, Tulahoma, Tenn.—Catalogues and prices on following: 3/4-in. gas pipe, 12-ft. lengths; carriage and machine bolts, 3/4-in.; expansion coil wire springs, single and double-wheel awning pulleys; small wire rope (about like twisted wire clothes line); malleable iron or steel special castings; gate hinges; plates of sheet brass or aluminum, 5x7 and 4x3, with lettering impressed or embossed; wire fencing, 46 in. high; some new woodworking machinery.

Glass (Plate).—Wm. K. Estes, Pleasureville, Ky.—Plate-glass front for grocery store.

Greenhouse Materials.—C. L. Wiseman, Keyser, W. Va.—Prices on sash and glass for 30x300-ft. greenhouse; also data and prices on heating apparatus.

Hardware.—See Gate Manufacturing Parts.—John T. Walston.

Heating Plant.—John J. Carlin, 215 St. Paul St., Baltimore, Md.—Information on central heating plant for 300 dwellings.

Heating Plants.—See Greenhouse Materials.

Heating Plant.—O. E. Fink, Middletown, Md.—Prices on heating plant for store and dwelling.

Heating (Steam) Equipment.—L. N. Gregory, Hickman, Ky.—Descriptive literature on steam-heating equipment.

Heating (Hot Air) Equipment.—Mims, Spence & Co., Luray, Va.—Hot-air heating for \$5000 church.

Hollow Tile.—W. W. Watson, Waxahatchee, Tex.—Prices on 1000 sq. ft. 4-in. hollow tile.

House Raising, Moving, etc.—See Contractors' Equipment.—R. E. Gilmore.

Hose (Fire).—See Reseaters (Valve), etc.

Hosiery, etc.—John Murray, manufacturers' agent, 24 Howard St., Glasgow, Scot-

land.—Interested (view to representation) in following: Hosiery, men's shirts, pants, hose and half-hose, ladies' hosiery of all kinds, towels, fancy artificial silk shawls, linens, lingerie, cotton piece goods; send samples and advise as to goods being in stock.

Labels.—Virginia Product Co., 218 Cumberland St., Norfolk, Va.—Name and address of label manufacturers; at Baltimore preferred.

Leather, etc.—S. B. Aftallon, Roustchouk, P. O. Box 57, Bulgaria.—Interested (view to agencies) in cottonseed oils, box-calf leather, wire nails, rubber shoes, etc.

Leathers and Hides.—See Metals, etc. Luigi Aubert.

Levee Construction.—Third Mississippi River Dist., P. O. Box 404, Vicksburg, Miss.—Bids until June 5 to construct about 680,000 cu. yds. levee enlargement; information on application.

Locomotives.—H. M. Waugh, Williamson, W. Va.—2 standard gauge dinkies, 22 to 30 tons; A1 condition; quick delivery.

Lumber.—Navy Dept., Bureau Supplies and Accounts, Saml. McGowan, Paymaster-Gen., Washington, D. C.—Bids until June 8 on following: For delivery Norfolk, Va., 10,000 ft. cypress, 9600 ft. yellow heart or cypress pine, 390 chestnut posts, and white pine windows and door sashes, all schedule 8325; for delivery Washington, white oak, white pine and 32,000 ft. North Carolina pine, all schedule 8349.

Machine Tools.—Navy Dept., Bureau Supplies and Accounts, Saml. McGowan, Paymaster-Gen., Washington, D. C.—Bids opened June 8 on following: For delivery Newport, R. I., schedule 8323—2 milling machines, 3 constant-speed type universal milling machines, four 4-spindle, sensitive drill presses, two 20-in. gear-box type shapers with extension base, and two 14-in. tool-room shapers, four 23-in. sliding head drills, eight 7 1/2x13 1/4-in. bench grinders, four screw-cutting engine lathes, two turbine bucket-cutting machines, four automatic screw machines, two lathes, turret and turret-threading attachments (4 lathes, 2 attachments); for delivery Brooklyn, N. Y.—electric drills: radial, portable and bench grinders (11 drills, 10 grinders), schedule 8319; delivery Norfolk—scroll and resawing machine, schedule 8315, and open-side planer, schedule 8318; delivery Washington—double-action toggle press, schedule 8316; delivery Philadelphia, Pa.—circulating distiller pump and set finished drawings, schedule 8321, and motor-driven combination ironer, schedule 8320; delivery Norfolk, Charleston—6 twin-drum hoisting engines, schedule 8327.

Machine Shop Equipment.—See Tools (Garage).—Tennessee Valley Motor Co.

Machine Tools, etc.—Bureau of Supplies and Accounts, Navy Dept., Washington, D. C.—Bids until June 8 for delivering nitric acid, ethyl alcohol, torpedo bronze forgings, pure mercury and machine tools at naval torpedo station, Newport, R. I. Apply for proposals to navy pay office, Newport, R. I., or to Bureau.

Mantels and Grates.—L. N. Gregory, Hickman, Ky.—Descriptive literature on mantels and grates.

Manufactures and Machinery.—See Metals, etc.—Luigi Aubert.

Metal (Snap) Buttons.—The Atlantic Co., 104 High Holborn, London, W. C., England.—To correspond with manufacturers of snap metal buttons similar to samples in office of Manufacturers Record.

Metals, etc.—Luigi Aubert, Via Vassalli Eandi 32, Torino, Italy.—Interested (with view to representation or purchase) in metals, wrought metals, copper and brass wire, aluminum, raw skins and leathers, raw cotton, coal, industrial machines, railroad material, millstones, vehicle axle, steel or iron pipes, and other articles of American production.

Military Supplies.—See Bensussan, Sides & Co.

Moss (Curing) Machinery.—H. D. Fletcher, Beaumont, Tex.—Data and prices on latest improving machinery for curing Spanish moss.

Office (Bookkeeping) Supplies.—See Stock Certificates, etc.—C. L. Wiseman.

Oil (Cottonseed).—See Leather, etc.—S. B. Aftallon.

Oils, etc.—Panama Canal, F. C. Boggs, Gen. Purchasing Officer, Washington, D. C.—Bids until June 12 on proposals, annual estimate for period ending June 30, 1916, for lubricating oils and greases, including valve oil, air-compressor cylinder oil, marine engine oil, stationary engine oil, locomotive engine oil, car oil, non-liquid oil or grease,

cup grease, black bear grease and gasoline; blanks and general information relating to this circular (No. 931) may be obtained from this office or offices of assistant purchasing agents, 21 State St., New York; 614 Whitney-Central Bldg., New Orleans, and 1086 North Point St., San Francisco; also from U. S. Engr. offices in Seattle, Los Angeles, Baltimore, Philadelphia, Pittsburgh, Boston, Buffalo, Cleveland, Cincinnati, Chicago, St. Louis, Detroit, Milwaukee, St. Paul, Chattanooga, Louisville, Mobile and Galveston; Commercial Club, Kansas City, Mo.; Chamber of Commerce, Quincy, Ill., and Commercial Club, Tacoma, Wash.

Oxygen-Hydrogen Plant.—See Reseaters (Valve), etc.

Paint-mixing Machinery.—Geo. Kilpatrick, Albany, Ga.—Data and prices on paint machinery.

Paper (Fancy).—See Chocolate Materials.—Angelina De Calvani.

Paving.—City of Port Lavaca, Tex.—Open bids about June 15 to drain and gravel or shell streets; city has mud shell in bay $\frac{1}{2}$ mi. distant and wants bids from contractors having equipment for delivering mud shell to city wharves; R. E. McGee, City Engr.; F. L. Young, official in charge.

Paving.—Board Comms., Knoxville, Tenn.—Bids addressed to D. G. Leahy, City Recorder, until June 4 on following paving, grading, curbing, etc., in Improvement Dists. Nos. 103, 105, 107, 108 and 109: About 35,000 sq. yds. paving, 15,000 cu. yds. grading, 10,000 lin. ft. storm sewer, etc.; separate bids may be submitted for grading, curbing and storm sewers; plans, specifications, etc., obtainable from J. B. McCalla, City Engr.; John W. Fleniken, Commr. Streets.

Paving.—City of McAlester, Okla., J. M. Gannaway, Clerk.—Bids June 2 on paving in Street Improvement Dist. No. 19; about 2500 cu. yds. excavation, 7500 sq. yds. paving, 4000 lin. ft. curb.

Paving.—Board of Public Works, Roger G. McGrath, Secy., Louisville, Ky.—Bids until June 2 to pave alley from Hancock to Clay St., alley from Bellewood to Moss Rose Ave., etc.; letting No. 585; drawings and specifications on file with Board of Public Works.

Paving.—Baltimore (Md.) Board of Awards.—Bids until June 2 to pave Lombard St. from Exeter to Washington, and Washington St. from Aliceanna to Fayette; contract No. 118; 24,400 sq. yds. sheet asphalt, 5550 sq. yds. vitrified block and 2060 sq. yds. granite block paving; specifications and proposal sheets furnished for \$5 by Paving Com., R. Keith Compton, Chrmn. and Consult. Engr., City Hall.

Road Machinery.—E. L. Sheldon, Chrmn., Oklahoma County Comms., Edmond, Okla.—Prices on graders, plows, scrapers, engines.

Paving.—Baltimore County Comms., C. J. Fox, Ch. Clerk, Towson, Md.—Bids until May 27 to improve following roads and avenues: Beaumont Ave., 9th Dist., $\frac{1}{2}$ mi.; Grindon lane, 9th Dist., $\frac{1}{2}$ mi.; Hollins Ferry Rd., 13th Dist., 1 mi.; Clarendon Ave., 1st Dist., $\frac{1}{2}$ mi.; Sparrows Point Rd., 15th Dist., 1 mi.; Wise Ave., 15th Dist., $\frac{1}{2}$ mi.; all to have concrete roadways; grade Maiden Choice Rd., 1st Dist.; plans and specifications on file with W. G. Suero, Roads Engr.

Planer and Matcher.—Meadows & Staton, Williamston, N. C.—Second-hand planer and matcher; good condition.

Piaster.—Pinellas Lumber Co., Clearwater, Fla.—See Building Material.

Plumbing.—S. C. Aikens, 617 Forsyth Bldg., Atlanta, Ga.—Plumbing to cost about \$1300 for clubhouse.

Pump (Circulating).—See Electric Furnaces.

Pump (Distiller), etc.—Bureau of Supplies and Accounts, Navy Dept., Washington, D. C.—Bids until June 8 for furnishing and laying vitreous tile, combination ironer, distiller pump, refrigerators and portable platform scales at Navy-yard, Philadelphia. Apply for proposals to navy pay office, Philadelphia, or to Bureau.

Pumps, etc.—Thrall Home Oil Co., R. M. Barnes, Secy., Thorndale, Tex.—Prices on pumps, fittings, tanks, etc.

Rails, etc.—T. J. O'Donnell, Sweetwater, Tex., or Midland, Tex.—Prices on 65 lb. 56-lb. relaying rails, spikes, angle bars, etc.

Red Oak Finish.—I. M. Gregory, Hickman, Ky. (See Flooring, Red Oak.)

Refrigerators.—See Pump (Distiller), etc.

Reseaters (Valve), etc.—Bureau of Supplies and Accounts, Navy Dept., Washington, D. C.—Bids until June 22 for deliver-

ing at Navy-yard, Puget Sound, Wash., naval supplies as follows: White ash, paint brushes, Port Oxford cedar, flour in bags, hemp gasket, gasoline, rubber fire hose, lampblack, rigging leather, valve resealing machines, evaporated milk, aluminum paint, oxygen-hydrogen generating plant, sheet rubber, sugar. Apply for proposals to navy pay office, Seattle, Wash., or to Bureau.

Rivet Machines.—See Electric Furnaces.

Road Construction.—Polk County Commissioners, J. A. Johnson, Clerk, Bartow, Fla.—Bids until May 28 to construct five $\frac{1}{4}$ -mi. sections of sand-asphalt road; specifications on file in Clerk's office.

Road Construction.—Tarrant County, J. A. Mulholland, County Auditor, Fort Worth, Tex.—Bids received until May 24 to construct section of Mansfield Rd. near Sycamore Creek; plans, profiles and specifications on file with County Engr., Courthouse; Jesse M. Brown, County Judge.

Road Construction.—Dallas County Board of Revenue, P. H. Pitts, Probate Judge, Selma, Ala.—Bids until June 21 to grade, grub, gravel and drain Blalock and Uniontown Rd., about $\frac{3}{4}$ mi.; also grade, grub, gravel and drain Barkers Mill Rd., about 10 mi.; specifications on file with Probate Judge.

Road Construction.—Maryland State Roads Com., O. E. Weller, Chrmn., 601 Garrett Bldg., Baltimore, Md.—Bids until June 15 to construct one section, about 4.40 mi., State highway, Somerset county, from

Scales.—See Pump (Distiller), etc.

Sewer Construction.—See Water-works and Sewer, Northport, Ala.

Sewer Construction.—Baltimore (Md.) Board of Awards, City Hall.—Bids until June 2 to construct lateral sewers and house connections in Dist. No. 24-A, sanitary contract No. 155; 3600 lin. ft. 27-in. sewer, 21,000 lin. ft. 8-in. to 15-in. sewer, 15,500 lin. ft. house connections; specifications and plans obtainable from Harry W. Rodgers, Secy. Sewerage Com., 904 American Bldg., for \$5.

Sewer Construction.—Board of Commissioners, Nashville, Tenn.—Bids until May 25 to construct clay pipe sewers in alleys No. 655 and 652 and in alley west of 12th Ave.; also to extend Belmont Blvd. trunk sewer; plans and specifications on file with City Engr.; H. E. Howse, Mayor.

Sewer Construction.—City Comms., John D. Kelley, City Secy., Galveston, Tex.—Bids until June 3 to construct sewers in alleys between Aves. C and E from 28th to 29th St.; require 800 lin. ft. 8-in. vitrified pipe sewer, 400 lin. ft. 15-in. vitrified pipe drain and 400 lin. ft. 1-ft. 8-in. by 4-ft. 6-in. concrete drain, together with appurtenances, etc.; plans on file with A. T. Dickey, City Engr.; M. E. Shay, Commr. Water-works and Sewerage.

Sewer Construction.—City of Big Spring, Tex., Jas. T. Brooks, Mayor.—To grant franchise for sewer system; city closely built.

Showcases.—See Fixtures (Store.)

Stoves.—Jewett Cash Store, Jewett, Tex. Oil stoves for cooking.

Tanks (Oil).—See Pumps, etc.—Thrall Home Oil Co.

Tile (Vitreous).—See Pump (Distiller), etc.

Tools (Garage).—Tennessee Valley Motor Co., Huntsville, Ala.—Complete list garage tools.

Tubes (Condenser), etc.—See Brass, Copper, etc.

Water-works Equipment.—Eaton & Dunn, Oilton, P. O. at Jennings, Okla.—Prices on boilers, engines, pumps; also standpipe and 6-in. and 4-in. pipe.

Water Wheel.—W. J. Lunsford, Hilton, Va.—Prices on water wheel; second-hand, good condition.

Water-works and Sewer.—City of Northport, Ala.—Bids until June 1 on complete water-works plant and sewer system; water-works plant includes 80,000-gal. steel or concrete pressure tower and tank, 80,000-gal. receiving tank, 500-gal. motor-driven pump, 12 fire hydrants, 3800 ft. 8-in. and 400 ft. 6-in. cast-iron pipe, 2-in. and 1 $\frac{1}{2}$ -in. galvanized pipe, valves, etc., pump-house; sewer system includes 3000 ft. 10-in. and 700 ft. 8-in. terra-cotta pipe, 15 manholes, 5 lamp-holes; plans and specifications at offices of Dr. C. P. Bell, Mayor, and of Edgar B. Kay, Engr., Tuscaloosa, Ala.

Well-drilling Machinery.—Thrall-Weir Oil Co., J. W. Hale, Engr., Weir, Tex. Prices on well-drilling machinery.

Wall (Wing) Construction.—Hillsborough County Comms., W. P. Culbreath, Clerk, Tampa, Fla.—Bids until June 2 to construct wing walls on Tampa-Plant City Rd.; for further information address Geo. Fuchs, Engr. of Roads, Tampa.

Wallpaper.—Mrs. Mollie Cox Stowers, Attalla, Ala.—Prices on wallpaper for dwelling.

Wharf.—Treasury Dept., Supervising Archt.'s Office, Washington, D. C.—Bids opened June 25 for constructing wharf, etc., for Cape Fear (N. C.) Quarantine Station near Southport, N. C.; drawings and specifications obtainable from custodian of station, Southport, or Treasury Dept., at discretion Supervising Archt.

Wire Nails.—See Leather, etc.—S. B. Aftalion.

Woodworking Machinery.—John T. Walston, Automatic Gate Co., Box 342, Tallahoma, Tenn.—New woodworking machinery. (See Gate Manufacturing Parts.)

Woodworking Machinery.—See Basket Machinery.

THE RITTMAN PROCESSES.

Progress Being Made Both as to Gasoline and Benzol.

In view of the large public interest being taken in the gasoline and benzol processes devised by Dr. Walter F. Rittman, chemical engineer of the Bureau of Mines, Secretary of the Interior Lane has issued the following statement:

"Excellent progress is being made in the development of the Rittman processes, and there is every reason to believe that both gasoline and the benzol processes will be on a commercial working plane within a reasonably short time. I am informed that the gasoline process is now ready for large scale industrial application, and the hope is expressed that the benzol process will be ready soon.

"The benzol process is being developed in co-operation with the Aetna Chemical Co. of New York, which company has entered into an agreement whereby all patentable equipment, processes and ideas available as a result of the co-operative work will be turned over to the department to be dedicated to the public.

"The department stands ready and is anxious to enter into similar agreements with any other companies in the country that will agree to the same terms—that all processes and ideas patentable in the development of either process shall be turned over to the department for the use of the public. The department is willing for all who are desirous of making use of the processes to do so to the fullest possible extent consistent with the proper

FOR the benefit of business concerns, engineers, contractors, machinery manufacturers, dealers and others who find it profitable to follow up daily the industrial, commercial, railroad and financial development of the South and Southwest as published in this Construction Department,

We issue every Business Day in the Year THE DAILY BULLETIN

The construction news as published in the Daily Bulletin is invaluable to all business people who want to keep in daily touch with the organization of business enterprises of all kinds throughout the whole South. Unlimited possibilities for the creation of business, for securing contract work, for the sale of machinery and supplies of all kinds, for bond buyers and others, are to be found through a close following up of the news in the Daily Bulletin.

The Daily Bulletin is an exceptionally desirable advertising medium.

The subscription price is \$25.00 a year. Are you a subscriber to it, or an advertiser in it? If not, you are missing an opportunity for profitable business.

Marion to Hopewell; concrete; contract \$-8; plans and specifications obtainable from Com.

Road Construction.—Road Comms. Town Creek Township of Brunswick County, Dr. E. G. Goodman, Chrmn., Bolivia, N. C.—Bids until June 9 to construct 7 mi. sand-clay roads; plans, profiles and specifications obtainable from Road Comms. at Bolivia or from W. H. Banck, Engr., Wilmington.

Road Construction.—Live Oak County Comms., Court, Oakville, Tex.—Bids until June 16 to construct roads in Road Dist. No. 4, to cost not more than \$40,000, and to purchase \$40,000 bonds; contractors may submit separate bids for construction of roads and sale of bonds or may include both in same bid; for information address J. H. Casey, Commr., Whitsett, Tex.; W. W. Caves, County Judge.

Road Construction.—Bell County Fiscal Court, W. C. Bingham, Clerk, Pineville, Ky.—Bids until June 5 to improve road between Middlesboro and Four Mile; plans, profiles and specifications on file with Cul-ton & Bailey, Pineville.

Roofing (Composition).—Pinellas Lumber Co., Clearwater, Fla.—See Building Material.

Roofing (Galvanized Iron).—Pinellas Lumber Co., Clearwater, Fla.—See Building Material.

Sash and Doors.—Pinellas Lumber Co., Clearwater, Fla.—See Building Material.

Sash and Glass.—See Greenhouse Materials.

Shingle Mill.—Meadows & Staton, Williamston, N. C.—Second-hand shingle mill.

Stain (Shingle).—Pinellas Lumber Co., Clearwater, Fla.—See Building Material.

Steam Shovel (Revolving).—H. M. Waugh, Martinsburg, W. Va.—1-yd. revolving shovel (Marion or Bucyrus), Williamson, W. Va., delivery.

Steel Shapes and Plates, etc.—Panama Canal, F. C. Boggs, Gen. Purchasing Officer, Washington, D. C.—Bids until June 11 to furnish steel shapes and plates, cold-rolled steel, steel and iron castings, wrought-iron and steel pipe, bolts, bolt spikes, turn-buckles, wire netting, steel wire, anchors, chain, ship augers and bits, mattocks, wheelbarrows, throttle valves, water-closets, laundry soap, gasoline, paper and lumber; blanks and general information relating to this circular (No. 930) may be obtained from this office or offices of assistant purchasing agents, 21 State St., New York; 614 Whitney-Central Bldg., New Orleans, and 1086 North Point St., San Francisco; also from U. S. Engr. offices in Seattle, Los Angeles, Baltimore, Philadelphia, Pittsburgh, Boston, Buffalo, Cleveland, Cincinnati, Chicago, St. Louis, Detroit, Milwaukee, St. Paul, Chattanooga, Louisville, Mobile and Galveston; Commercial Club, Kansas City, Mo.; Chamber of Commerce, Quincy, Ill., and Commercial Club, Tacoma, Wash.

Stock Certificates, etc.—C. L. Wiseman, Asst. Secy., Food Products & Mfg. Co., Keyser, W. Va.—Samples and prices on corporation bookkeeping (books) equipment, stock certificates, seal, etc.

protection of the processes in order that the public may derive the greatest measure of benefit therefrom. It looks as if it would be only a short time before the complete mechanical equipment necessary for the practice of the processes has been worked out and the inventions covered by patent applications.

"The department considers that all those desirous of employing the processes should agree to contribute to the public, in the same manner that Dr. Rittman has done with his basic patents, all patentable ideas that may be conceived as a result of the employment of these processes. This is the only condition that the department imposes, and its reasonableness will become apparent when it is considered that Dr. Rittman has given to the public, through the department, processes which conservatively might be worth millions of dollars were they controlled by a private industrial concern exclusively for its selfish purposes.

"As soon as the department is assured that the public's interests are properly safeguarded a full and complete scientific paper describing the processes will be issued. In the meantime the processes will be open to anyone who wishes to develop them under the conditions imposed.

"At the first public demonstration of the Rittman benzol and gasoline processes, held March 8 before the representatives of the Army and Navy, the General Chemical Co., the Aetna Chemical Co., the Standard Oil Co. of Indiana, the du Pont de Nemours Powder Co. and some twenty or more representatives of the National Petroleum Association and other prominent refining interests throughout the eastern part of the United States, announcement was made that both processes might be used by all interested persons upon application to the department. At the same time, however, because of the desire to give the public the fullest possible benefits of the Rittman processes, it was stated that the use of the processes would be coupled with the condition that the persons using the same would give to the public the benefits of such ideas along mechanical lines as they might conceive during the employment of the processes.

"A number of Western and Mid-Continent refiners, who were unable to be present at the first demonstration, recently requested the department to give them an opportunity to witness the workings of the processes, and for their benefit a demonstration was held on May 14, which was attended by accredited representatives of the Waverly Oil Co., Western Petroleum Refiners' Association, the Vacuum Oil Co., the Atlantic Refining Co., the Butler County Refining Co. and others. As a result of this latter demonstration, it is expected that several of the refiners will employ the Rittman processes in their works under conditions similar to those which have already been agreed to by the Aetna Chemical Co."

Pan-American Road Congress.

The executive committee of the Pan-American Road Congress has received word from the officials of the Tri-State Good Roads Association that it has been decided to co-operate with the Pan-American Road Congress by changing the date of the Pacific Coast Roads Congress from the week of August 2 to that of September 13. This means the practical merging of the meeting of the Tri-State Association into that of the Pan-American Road Congress. At the meeting of the executive committee it was felt that the co-operation that will thus be secured through the action of the Tri-State Good Roads Association will be of very material assistance

in making the Pan-American Road Congress, to be held in Oakland, Cal., September 13-17, the greatest gathering of its kind ever held in the world.

The Pan-American Road Congress, as already announced, will be held under the direct auspices of the two leading national good-roads organizations, namely, the American Road Builders' Association and the American Highway Association. Plans for the meeting are in the hands of an executive committee made up of Governor Charles W. Gates of Vermont, chairman, and two members from each of the two organizations.

Progress reports of the various sub-committees were submitted at the meeting of the executive committee last week. It is apparent that great interest is being taken by the public in the forthcoming congress. Official invitations will soon be issued to all the several States of the United States, the Canadian provinces and the South American countries to send delegates.

While the topics have not as yet all been assigned to the speakers, the following subjects were decided upon at the last meeting of the committee:

"The History and Future of Highway Improvement," "The Benefits and Burdens of Better Roads," "The Relation of the Road to Rail and Water Transportation," "The Responsibility for Road Conditions and the Way to Secure the Improvement of Road Conditions," "Tree Planting and Roadside Aesthetics," "The Essentials of Proper Laws for Highway Work," "Highway Indebtedness; Its Limitation and Regulation," "Organization and System in Highway Work," "The Educational Field for Highway Departments," "System in Highway Accounting," "Uniformity for Highway Statistics and Data," "Engineering Supervision for Highway Work," "The Merit System in Highway Work," "The Determination of the Justifiable Outlay for Specific Cases of Proposed Highway Improvement," "Proper Road Location; Its Importance and Effects," "Road Drainage and Foundations," "Highway Bridges and Structures," "Roadway Surfacing," "Resurfacing Old Roads," "Street Pavements," "Convict Labor for Highway Work," "Equipment for Highway Work," "Motor Traffic; Its Developments, Trend and Effects," "Load and Tire Effect and Regulation," "Comparisons of Traffic and Their Economic Value," "Maintenance, Materials and Methods," "Dust Suppression and Street Cleaning."

FINANCIAL NEWS

FINANCIAL CORPORATIONS

Ala., Birmingham.—The American Health & Accident Co. and the People's Insurance Co. have merged under the name of the American-Health Insurance Co. Dr. J. H. Ferrell is Pres.; J. Robert Riley, Gen. Mgr.; W. W. Long, V.-P., and E. E. Smith, Secy.-Treas.

Fla., Boynton.—Bank of Boynton has begun business; capital \$15,000; L. P. McCork, Pres.; J. W. Harrell, Cash.

Fla., Jacksonville.—Southern States Trust Co. chartered; capital \$200,000; surplus \$50,000; organizers, Charles R. Rudisill, Pres.; J. S. Peterson and A. E. Adamson, all of Jacksonville, and R. C. Middleton of Crescent City, Fla.

Fla., Jacksonville.—German Bank and the First Savings Bank have consolidated under the name of the First-Germania State Bank with \$65,000 capital. D. J. Herrin, Pres.; F. W. Weinberg, 1st V.-P.; D. H. McMillan, 2d V.-P.; C. H. Address, Cash.

Fla., Kenansville.—First State Bank of Kenansville, capital \$15,000, has begun business. M. M. Smith, Pres.; A. L. Hunt, V.-P.; B. F. Row, Cash.; L. B. Drawy, F. E. Trudell and J. F. Parker.

Ga., East Point.—First National Bank of

East Point is approved; capital \$50,000; organizers, J. H. Lipscomb, J. C. Woodward, A. M. Stewart, J. A. McCrary and W. G. Whisenant.

Ga., Hartwell.—Hart County Bank is being organized with \$25,000 capital; C. I. Kidd, Pres.; Julian R. McCurry, V.-P., and Frank T. Kidd, Cash.

Ga., Nicholls.—Bank of Nicholls, formerly a branch of State Bank of Waycross, is chartered; capital paid in, \$15,000. Directors: E. Burkett, Pres.; D. H. Meeks, V.-P.; C. C. Mertens, Cash.; H. Altman and Dan Hall.

Miss., Columbus.—Columbus National Bank chartered; capital \$100,000; surplus \$50,000; B. A. Weaver, Pres.; C. F. Sherrod, V.-P.; C. H. Ayers, Cash.; E. R. Hopkins, Asst. Cash. Business began May 15. This succeeds the banking department of the Columbus Insurance & Banking Co.

Miss., Nettleton.—The Nettleton Home Bank is organized with the following directors: J. A. Wiggul, Pres.; J. D. Bryan and W. G. Francis, V.-Ps.; Roy Dabbs, Cash.; W. H. Sumner, Dr. C. O. Bryan, W. R. Trapp, G. A. McDuffie, J. M. Wiggul, H. Y. Tapscott and H. Y. Johnson.

N. C., Marshall.—Marshall Realty, Collection and Insurance Agency, capital \$10,000, is inceptd. by W. B. Ramsey, Guy V. Roberts and Roberta Roberts.

S. C., Orangeburg.—Merchants' Bank Check Corporation inceptd.; capital \$50,000. W. A. Livingston, Pres. and Secy.; H. C. Wannamaker, Treas., and M. N. Perreyclear, Sales Mgr. Business began May 10.

Tenn., Nashville.—The Hermitage National and the Tennessee National banks have merged under the title of the Tennessee-Hermitage National Bank; capital \$300,000; surplus \$200,000. E. A. Lindsey will be Pres.; Watkins Crockett, V.-P.; J. L. Campbell, Cash.

Tex., Dallas.—The Fidelity Trust Co. of Kansas City, Mo., capital \$2,000,000, has opened a branch in Dallas, Tex., with C. L. Kribs as manager.

Tex., Dallas.—Insurance Investment Co., capital \$10,000, is inceptd. by A. R. Phillips, C. C. Wright and Sam P. Cochran.

Tex., Houston.—State Bank & Trust Co. will open for business June 15 at 910 Preston Ave. John A. Wilkins, Pres.; Andrew Dow, W. A. Wood, J. Q. Tabor, March Culmore, V.-Ps.; Horace M. Wilkins, Cash.

Tex., Littlefield.—First National Bank is approved; capital \$25,000; organizers, R. S. Beard, O. L. Slaton, A. P. Duggan, A. A. Childress and G. C. Wolfarth.

Tex., Pharr.—Mutual Investment Co., capital \$40,000, is inceptd. by G. F. Linesetter, E. J. Kelso and Ashley Cawthon.

NEW SECURITIES

Ala., Ironaton.—Steps have been taken to call an election to vote on \$20,000 school bonds. L. J. Blau is Chrmn. Board of Education.

Ala., Lanett.—\$20,000 school-building bonds are voted. Address Board of Education.

Ala., Mobile.—Election will probably be held in Mobile county to vote on \$150,000 school bonds. Address Board of School Commissioners.

Ala., Northport.—\$13,000 water-works and \$3000 sewer 6 per cent. 10-year bonds are voted and bids for same will be opened June 1. Address T. B. Kay, Tuscaloosa, Ala. C. P. Bell is Mayor.

Ark., Little Rock.—\$50,000 5 per cent. 20-year \$500 school district bonds were purchased at par May 17 through the Union Trust Co., Little Rock, to the Wm. R. Compton Bond & Mortgage Co., St. Louis. Rees P. Horrocks is Clerk of Board.

Fla., Bartow.—Bids will be opened June 15 for bonds of Davenport Special Tax School Dist., Polk county. C. A. Parker is Secy. Board of Public Instruction.

Fla., Clearwater.—Bids will be received until 10 A. M. June 22 for \$15,000 Special School Tax Dist. No. 6, Green Springs, and \$20,000 Special School Tax Dist. No. 2, Clearwater, 6 per cent. 25-year Pinellas county bonds. Address Dixie M. Hollins, Secy. Board of Public Instruction Pinellas County.

Fla., Daytona.—\$150,000 5 per cent. 40-year sewer and drainage bonds have been sold as follows: Brown & Co., Jacksonville, \$100,000; Merchants' Bank of Daytona, Fla., \$50,000.

Fla., Fellsmere.—\$25,000 6 per cent. bonds Special Tax School Dist. No. 14, St. Lucie county, have been purchased by Terry, Griggs & Slayton, Toledo, O. Address Board of Public Instruction St. Lucie County, Geo. A. Saeger, Chrmn.

Fla., Fort Meade.—Bids will be received until noon June 15 by J. J. Singleton, Secy. Board of Bond Trustees, for \$55,000 5 per cent. 30-year paving, electric-light, water and sewer bonds; dated May 1, 1915; denomination \$1000 and \$500.

Fla., Key West.—Bill is to be introduced in the Legislature asking that an election be called to vote on \$300,000 of bonds for building a breakwater and seawall. Address County Commrs.

Fla., Lake City.—Steps are being taken in Columbia county to call an election to vote on \$25,000 special district paving bonds. Address R. W. Turner, Chrmn. Board, Lake City, R. F. D. No. 3.

Fla., Palmetto.—Palmetto Road Dist., Manatee county, will, it is stated, issue \$160,000 road bonds. George W. Blackburn is Chrmn. Board County Commrs.

Fla., Pensacola.—All bids received May 17 for \$400,000 4 1/2 per cent. 30-year \$1000 municipal dock and belt-line railroad bonds were rejected. A. Greenhut is Mayor.

Fla., Port St. Joe.—The \$4000 bonds Special School Dist. No. 16 to be voted on May 27 are 5 per cent; denomination \$500; dated Aug. 3, 1915, maturing 1924 to 1931, inclusive. J. D. Parish is Chrmn. Board of Public Instruction, Calhoun county. J. F. Durham is County Supt. If election carries, bonds will be offered for sale June 29.

Fla., Reahreeze.—\$15,000 6 per cent. water-works bonds maturing 1945 have been purchased at par by local parties. Leonard W. Lott is Mayor. (Recent item gave amount as \$9000.)

Fla., Titusville.—Election is to be held in Brevard county June 15 to vote on \$150,000 Special Road and Bridge Dist. bonds. Address Board of County Commrs., J. F. Mitchell, Clerk.

Fla., West Palm Beach.—Bids will be received until noon June 1 by Board of County Commrs., Palm Beach county, for \$35,000 5 per cent. 30-year \$500 bonds Special Road and Bridge Dist. No. 3. F. E. Encell is Chrmn. and Geo. O. Butler, Clerk County Commrs. Further particulars will be found in the advertising columns.

Ga., Albany.—\$40,000 auditorium and \$40,000 school 5 per cent. 30-year bonds have been purchased at \$3304 premium by John Dickey of Augusta, Ga.

Ga., Atlanta.—Election will probably soon be called to vote on \$3,500,000 or \$4,000,000 of bonds for high schools, water-works, hospital and other improvements. Address Bond Committee.

Ga., Decatur.—Election is to be held June 5 to vote on \$15,000 water-works and \$5000 school 5 1/2 per cent. 30-year bonds. P. E. McCurdy is Mayor.

Ga., East Point.—The \$30,000 school bonds to be voted on June 29 are 30-year 5 per cent; denomination \$500. R. F. Thompson is Secy. and Treas. Board of Education.

Ga., Lafayette.—\$19,000 5 per cent. 29-year \$500 sewer bonds have been purchased by J. B. McCrary Co. of Atlanta.

Ga., McCaysville, P. O. Copperhill, Tenn.—Bids will be received until 10 A. M. June 1 by J. E. Adams, Mayor of McCaysville, Ga., for \$10,000 7 per cent. 30-year school bonds.

Ga., Rome.—The sale of \$75,000 4 per cent. municipal building bonds to Breed, Elliott & Harrison of Cincinnati has been cancelled. Hugh McCrary is Clerk of Council.

Ga., Waynesboro.—\$19,000 5 per cent. \$500 school-building bonds have been voted. Date for opening bids not yet decided. F. M. Cates is Mayor.

Ky., Dayton.—No satisfactory bids were received May 17 for the \$134,000 4 per cent. 20-year \$500 renewal and funding bonds. W. C. Quinby is Mayor and Will C. Martin City Clk.

Ky., Hickman.—Election called May 22 to vote on \$200,000 Fulton county highway bonds is postponed indefinitely. E. I. Stahr is County Judge.

Ky., London.—All bids received May 20 for \$100,000 Laurel county road bonds were rejected. J. K. Lewis and W. L. Brown have been appointed to negotiate sale by June 1.

Ky., Louisville.—\$100,000 Lawrence county road and bridge bonds defeated.

Ky., Maysville.—\$200,000 Mason county road bonds defeated.

Ky., Morehead.—Petitions are to be circulated in Rowan county calling an election to vote on \$100,000 road bonds. Address County Commrs.

Ky., Mt. Vernon.—\$100,000 5 per cent. 5-30-year Rockcastle county road bonds have been declared valid by the Court of Appeals. E. R. Gentry is County Atty.

Ky., Whitley City.—Election is to be held July 10 to vote on \$100,000 McCrory county road bonds. Address County Commrs.

La., Alexandria.—The following districts in Rapides parish have voted school bonds: Glenmore, \$25,000; Poland, \$16,000. Address Police Jury.

La., Campti.—\$40,000 road bonds are voted. Address Road Commrs.

La., Estherwood.—\$38,000 5 per cent. 1-year \$500 drainage bonds Fifth Ward, Drainage Dist. No. 1, Acadia parish, were purchased by People's Bank & Trust Co., Lafayette, La.

La., Hammond.—\$40,000 5 per cent. 5-40-year \$500 sewer bonds were voted May 20. T. R. Thames is Commr. of Finance.

La., New Orleans.—\$1,250,000 5 per cent. bonds for elevator have been sold at par by the Dock Board through the assistance of R. S. Hecht, trust officer of the Hibernia Bank & Trust Co., and Sol. Wexler, Prest. Whitney Central National Bank, and J. C. Thompson, of the firm of Dillon, Thompson & Clay of Chicago.

La., Plaquemine.—Election is to be held June 22 to vote on \$60,000 5 per cent. 40-year bonds of White Castle Drainage Dist., Iberville Parish. Address Board of Commrs.

La., Winnsboro.—\$18,000 Franklin parish school bonds are voted. Address School Board.

Miss., Corinth.—Bids will be received until 10 A. M. June 1 by E. B. Mitchell, Auditor of Alcorn county, for \$12,000 6 per cent. 1-20-year drainage bonds.

Miss., Ripley.—Ordinance has been prepared providing for the issuing of \$13,000 6 per cent. bonds recently voted; dated June 1, 1915; maturity June 1, 1917 to 1936, inclusive. Sam Nelms is Mayor.

Miss., Laurel.—\$60,000 5 per cent. 20-year school, street and water-works bonds have been purchased at par and accrued interest to date, less commission of \$900, by Mortgage Security Co., New Orleans, La.

Miss., Wheeler.—\$5000 6 per cent. 20-year high-school bonds voted last November will be offered for sale as soon as bond attorneys pass upon the legality of issue. C. R. Lacy is Chancery Court Clerk, Booneville, Miss.

Mo., Carthage.—Petition is to be circulated in Jasper county asking that an election be called to vote on \$100,000 sanitarium bonds. Address County Commrs.

Mo., Carthage.—\$10,000 4 per cent. \$500 school bonds voted April 27 will be purchased by local parties. Address Board of Trustees, Carthage School Dist., Jasper county.

Mo., Joplin.—\$13,500 viaduct and \$12,500 incinerator bonds defeated.

Mo., Prince Frederick.—Bids will be received until 10 A. M. June 1 for \$25,000 6 per cent. Calvert county courthouse bonds, maturing June 1, 1925 to 1940, inclusive; denominations \$250, \$500 and \$1000. Address County Commrs., James Broome, Clerk.

N. C., Aurora.—Election is to be called to vote on \$7500 Aurora School Dist. bonds. Address Board of Education.

N. C., Benson.—\$30,000 6 per cent. 30-year School Dist. Banner No. 1, Johnson county, have been purchased at private sale by Sidney Spitzer Co., ~~Greenville, S. C.~~ Rose is Secy. School Board.

N. C., Barnardsville.—\$6000 Barnardsville Dist. high-school building bonds were voted May 18 and bids for same are now being received. Address Prof. W. H. Hipps, Asheville, N. C. S. R. Whitaker is Secy. Board of School Commrs., Barnardsville.

N. C., Carthage.—Bids will be received until June 7 by Commrs. Moore County for \$10,000 6 per cent. county home bonds, payable \$3000 5 years from date and \$3000 each year thereafter. Address U. L. Spence, Carthage. *Further particulars will be found in the advertising columns.*

N. C., Chapel Hill.—\$35,000 6 per cent. Chapel Hill School Dist. bonds are voted. N. W. Walker is Secy. School Board.

N. C., Charlotte.—\$215,000 5 per cent. Mecklenburg county refunding bonds have been purchased at \$3,392.70 premium by R. M. Grant & Co., New York.

N. C., Danbury.—Bonds for courthouse are to be issued by Stokes county. Address County Commrs.

N. C., Dobson.—Election is to be held in Long Hill township, Surry county, June 5 to vote on \$10,000 5 per cent. road bonds; denomination, \$1000, \$500 or \$100. J. B. Sparger is Clerk Board of County Commrs.

N. C., Dobson.—Election is to be held June 8 to vote on \$30,000 6 per cent. 30-year Dobson township, Surry county, road bonds. J. B. Sparger is Chrmn. Board of County Commrs.

N. C., Durham.—Bids will be received until noon June 16 by City Clerk for \$150,000 5 per cent. 30-year \$500 water-plant bonds.

N. C., Gastonia.—Election is to be held June 22 to vote on \$100,000 school-building bonds. T. A. Ratchford is Clerk.

N. C., Gatesville.—Bids will be received until noon June 7 by T. E. Hoffer, Register of Deeds, for \$8000 6 per cent. 30-year Holly Grove township, Gates county, road-improvement bonds; denomination \$500 or \$1000.

N. C., Henderson.—An election is to be called, it is reported, to vote on street improvement and funding bonds. Address The Mayor.

N. C., Henderson.—\$50,000 Vance county road bonds are voted. Address B. H. Perry.

N. C., Mt. Airy.—Election to vote on \$25,000 5 per cent. 30-year school bonds is to be held June 1. Address Board of School Commissioners.

N. C., Mt. Gilead.—The \$20,000 school-building bonds recently voted are 20-year 6 per cent. Bonds will be sold at private sale. J. A. McAuley is Secy. School Dist.

N. C., Newland.—\$150,000 5 1/2 per cent. 40-year Avery county \$1000 road bonds have been purchased by C. M. Malone & Co., Asheville, N. C., at par, premium and expenses.

N. C., Oxford.—Election to vote on Granville county school bonds will be held June 19. Address Board of Education Granville County.

N. C., Pittsboro.—No satisfactory bids were received May 15 for \$50,000 5 per cent. 40-year Matthews township, Chatham county, road-improvement bonds, and they are now being offered at private sale. Address Siler & Milliken, Attys., Siler City.

N. C., Raleigh.—A letter to the Manufacturers Record says that school bonds authorized for Wake county by last Legislature were voted down on May 15. This denies recent report that \$50,000 Middle Creek Township, Wake county, school bonds had been voted.

N. C., Roxboro.—Bids will be received until 11 A. M. June 25 by R. A. Burch, Secy. Highway Com., for \$75,000 5 per cent. 40-year Person county road-improvement bonds; dated July 1, 1915. *Further particulars will be found in the advertising columns.*

N. C., Warrenton.—\$50,000 water-works and sewerage 5 per cent. bonds are voted. John W. Allen is Mayor.

N. C., Wilson.—Election is to be held July 6 to vote on \$250,000 gas plant, street and water bonds. Address Board of Town Commissioners.

Okla., Clinton.—\$35,000 school bonds are voted. Address Board of Education.

Okla., Cornish.—Cornish School Dist. No. 14, Jefferson county, has voted school bonds. Address Board of Trustees.

Okla., Beggs.—\$35,000 water-works and \$8000 sewer bonds defeated.

Okla., Hitchcock.—Hitchcock Consolidated School Dist., Blaine county, has voted school bonds. Address Board of Trustees.

Okla., Madill.—Odell township, Marshall county, will vote June 9 on \$38,000 road bonds. Edwin Kirk is County Clerk. (Previously mentioned.)

Okla., Mannsville.—\$5550 electric-light-plant bonds are voted. Address The Mayor.

Okla., Perry.—\$100,000 Noble county courthouse and park bonds are voted. Address County Commrs.

Okla., Sapulpa.—\$150,000 school bonds are voted. Address School Board.

Okla., Supply.—\$10,000 6 per cent. bonds School Dist. 57, Woodward county, were purchased at \$100 premium and accrued interest by R. J. Edwards, Oklahoma City.

S. C., Abbeville.—Bids will be received until June 1 for \$6500 6 per cent. 20-year \$250 bonds School Dist. No. 3, Abbeville county. T. D. Cooley is Chrmn. Board of Trustees, Lowndesville, S. C.

S. C., Blackville.—\$14,000 6 per cent. 20-40-year improvement bonds have been purchased at par by local investors. J. M. Farrell is Chrmn. Public Service Com.

S. C., Chester.—Election is to be held to vote on \$100,000 5 per cent. 25-year street and sidewalk improvement bonds. Address The Mayor.

S. C., Florence.—Bids will be received until June 15 by G. L. Brodrick, Town Clerk, for \$7500 water and sewer, \$25,500 electric-light and \$25,000 street-paving 5 per cent. \$500 and \$1000 bonds, dated May 1, 1915.

S. C., Greenville.—\$75,000 5 per cent. 20-year school bonds are voted. P. T. Hayne is Chrmn. and R. E. Geer Secy. Board of Trustees.

S. C., St. Matthews.—\$6000 5 per cent. school-improvement bonds have been purchased at par by local parties. Address Board of Education.

Tenn., Bristol.—Steps are being taken to issue \$100,000 light-plant bonds. Address The Mayor.

Tenn., Bristol.—Bids will be opened about June 20 for \$10,000 of an authorized issue of \$25,000 6 per cent. 30-year street-improvement

bonds. Address W. H. Lynn, Commr. Accounts and Finance.

Tenn., Brownsville.—\$12,500 6 per cent. Haywood county school bonds have been purchased at \$57 premium by Powell, Gerard & Co., Chicago.

Tenn., Cleveland.—Bids will be received until 2 P. M. June 16 for \$75,000 sewer and \$15,000 city hall and fire department 5 per cent. \$500 bonds, maturing 10 bonds 10 years; 30, 15 years; 30, 20 years, and balance in blocks of 40 bonds every 5 years thereafter. Elmo Bartlett is City Recorder. *Further particulars will be found in the advertising columns.*

Tenn., Clinton.—\$157,000 Anderson county bridge, road and school bonds have been sold. Address County Commrs.

Tenn., Memphis.—No satisfactory bids were received May 30 for \$350,000 4 1/2 per cent. school bonds, and they will be reoffered on May 27 as 5 per cents. Address Board of Education, J. P. Norfleet, Prest.

Tenn., Shelbyville.—\$20,000 6 per cent. 10-36-year \$500 bonds, issued to pay floating indebtedness, were purchased at \$905 premium by Powell Gerard Co., Chicago, Ill.; dated July 1, 1915. T. H. Smith is Mayor.

Tenn., Sweetwater.—Election is to be held June 10 to vote on \$5000 15-year street-improvement and \$10,000 20-year school 5 per cent. bonds. Address The Mayor.

Tenn., Tazewell.—Bids will be received until 11 A. M. June 8 for \$372,000 30-year \$500 or \$1000 Claiborne county road and bridge bonds; dated June 1, 1915. S. H. S. Morison is Judge.

Tenn., Whiteville.—Election is to be held to vote on \$5000 high-school building bonds. Address Board of Education.

Tenn., Crossville.—Bill has been prepared providing for the sale of \$200,000 5 per cent. 40-year Cumberland county bonds. Address County Commrs.

Tenn., Park City.—Bill is prepared providing for the issuing of \$25,000 bonds; \$14,126.25 to pay off school, sewer and fire-equipment indebtedness and \$10,873.75 for street improvements; interest not to exceed 5 per cent. Address The Mayor.

Tenn., Waverly.—\$250,000 5 per cent. 30-year Humphrey county road bonds, recently voted, will be placed on the market soon after July 1. Address Jas. T. Anderson, Chrmn. Highway Com., Hurricane Hill, Tenn.

Tex., Anderson.—Election is to be held in Grimes county June 15 to vote on \$150,000 5 1/2 per cent. 10-40-year bonds Road Dist. No. 6. Reid Rikard is County Judge.

Tex., Austin.—Attorney-General has approved the following securities: \$15,000 Rankin Independent School Dist. 5 per cent. 40-year bonds; \$40,000 street and \$34,000 water-works 5 per cent. 10-40-year bonds Magnolia Park; \$19,500 6 per cent. 10-40-year Goliad county bridge repair bonds; \$3500 5 per cent. 5-20-year bonds Walker county common school district No. 9; \$2500 5 per cent. 8-20-year bonds Bastrop county school district No. 29; \$800 5 per cent. 10-20-year bonds Houston county common school district No. 75; \$5000 5 per cent. 10-20-year bonds Sonora independent school district.

Tex., Brownwood.—Bids will be opened June 15 by R. E. Lee, City Atty., for \$7000 school and \$8000 sewer 5 per cent. 40-year \$1000 bonds, voted March 23, 1915.

Tex., Ballinger.—\$80,000 Ballinger School Dist., Runnels county, bonds defeated.

Tex., Ballinger.—Elections have been ordered June 15 for schoolhouse bonds in three common school districts of Runnels county, aggregating \$9300. M. Kleberg is County Judge.

Tex., Ballinger.—Ballinger School Dist., Runnels county, bonds defeated.

Tex., Ballinger.—The following bonds have been voted in Runnels county rural schools: Content, \$2500; Norton, \$5000; Trullitt and Long Branch, \$2500; Bell, \$2500. Address Board of Education Runnels County.

Tex., Cleveland.—\$25,000 of the \$40,000 5 per cent. 40-year school bonds voted May 1 will be offered now; denomination \$1000. G. O. Barile is Prest. School Board.

Tex., Commerce.—\$32,500 street-improvement bonds are voted. Address The Mayor.

Tex., Corpus Christi.—Bids will be received until 4 P. M. May 28 by F. J. Mulligan, City Secy., for \$100,000 5 per cent. 20-40-year street-paving bonds.

Tex., Cuero.—The election to vote on \$57,000 bonds Road Dist. No. 4, DeWitt county, will be held June 24. Address County Commissioners.

Tex., El Paso.—\$17,000 Ysleta Dist., El Paso county, school bonds were recently voted

and will soon be placed on the market. Address Board of Education.

Tex., Goliad.—\$37,000 5 1/2 per cent. 1-30-year Goliad county road and bridge warrants have been purchased by E. B. Blanton, Mgr. Bond Dept., Commonwealth Trust Co., Houston.

Tex., Hallettsville.—Election is to be held June 29 to vote on \$150,000 Shiner Justice Court Precinct, Lavaca county, bonds. Address County Commrs.

Tex., Littlefield.—\$15,000 5 per cent. 40-year school district school-building bonds are voted; denomination \$500. Bids for same will be opened about June 15. Address Board of Trustees, Littlefield Dist., Lamb county.

Tex., McKinney.—\$375,000 of an issue of \$665,000 5 per cent. 40-year Collin county road bonds have been purchased by a Denver firm. H. L. Davis is County Judge.

Tex., Merkel.—Election was held May 23 to vote on \$18,000 Merkel Independent School Dist. bonds. Address Board of Education.

Tex., Nacogdoches.—Petition is being circulated asking that an election be called in Nacogdoches Independent School Dist. No. 1 to vote on \$60,000 school bonds. Address Board of Education.

Tex., Orange.—Election is to be held June 19 in Precinct No. 3, Orange county, to vote on \$25,000 road bonds. Address County Commrs.

Tex., Port Lavaca.—Bids were received until 10 A. M. May 25, by P. M. Dudgeon, Judge Calhoun County, for \$60,000 5 per cent. 40-year bonds Seadrift Drainage Dist. No. 2, Calhoun county.

Tex., Port Lavaca.—\$17,500 5 per cent. 10-40-year street bonds are voted. H. C. Innis is Mayor. Election will probably soon be ordered to vote on water-works bonds.

W. Va., Stealey Heights.—Bids are being received by M. B. Newlon, Town Recorder, for \$30,000 6 per cent. 1-10-year \$1000 paving bonds; dated June 1, 1915.

Tex., Richmond.—\$130,000 5 per cent. 11-38-year bonds Fort Bend County, Road Dist. No. 4, have been purchased by E. B. Blanton, Mgr. Bond Dept., Commonwealth Trust Co., Houston.

Tex., San Diego.—San Diego Independent School Dist. will vote June 5 on \$18,000 bonds for school building and equipping and maintaining manual-training department and laboratory. Address Board of Trustees.

Tex., Somerville.—\$12,000 5 per cent. 2-40-year bonds Somerville Independent School Dist. were purchased at par and accrued interest by State Board of Education.

Tex., South Park, P. O. Beaumont.—\$50,000 South Park Independent School Dist. 5 per cent. 30-40-year \$1000 bonds are voted, and bids for same will be opened May 31. Address L. M. Hebert, Prest. of Dist., regarding bonds. For other information address A. H. Denver, Beaumont.

Tex., Taylor.—All bids received May 11 for \$100,000 5 per cent. \$1000 paving bonds were rejected. A. V. Hyde is City Clerk.

Tex., Waxahatchie.—\$22,000 5 per cent. 1-20-year \$1000 bonds Ellis County Levee Improvement Dist. No. 1 have been purchased by E. B. Blanton, Mgr. Bond Dept., Commonwealth Trust Co., Houston.

Va., Shadyside.—Water-works bonds are reported purchased by Hoehler, Cumming & Prudden, Toledo, O.; at \$45,022.50 and accrued interest. Address Town Council.

W. Va., Keyser.—Election will probably be held to vote on water-works bonds. Address The Mayor.

W. Va., Keyser.—Bids will be received until noon June 1 by Board of Education Keyser School Dist., Mineral county, for \$30,000 5 per cent. \$500 school bonds. Address Board of Education, Chas. N. Fennell, Prest. *Further particulars will be found in the advertising columns.*

W. Va., Princeton.—\$350,000 5 per cent. 30-year Mercer county road \$1000 bonds are voted. Address W. J. Lilly, Prest. Mercer County Court, Athens, W. Va.

FINANCIAL NOTES

The 31st annual convention of the Texas Bankers' Association, in session at Waco, elected officers for the ensuing year as follows: Prest., Joe Hirsch of Corpus Christi; V.-P.s, Aug. DeZavala of Houston, R. E. Mims of Laredo, R. J. Eckhardt of Taylor, C. M. Campbell of Temple, J. W. Murchison of Athens, L. L. Shields of Santa Anna and F. H. Sherwood of Fort Worth; Treas., C. A. Fiske of Amarillo. The election of a secretary was left to the executive committee. Next year the convention will be held at Houston.

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SUMMERFIELD BALDWIN, Vice-Pres.

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C. G. MORGAN, Asst. Cashier.

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IS HE CRAZY? The owner of a plantation in Mississippi is giving away a few five-acre tracts. The only condition is that figs be planted. The owner wants enough figs raised to supply a canning factory. You can secure five acres and an interest in the factory by writing Eubank Farms Company, 601 Keystone, Pittsburgh, Pa. They will plant and care for your trees for \$6 per month. Your profit should be \$1000 per year. Some think this man is crazy for giving away such valuable land, but there may be method in his madness.

NORTH CAROLINA

FOR SALE.—1000 acres Martin county; 3,000,000 feet merchantable pine timber on same; on public road; good location; fine soil; no better in North Carolina; worth \$30 per acre; will take \$12.50 on ten years' time. Also, 1200 acres swamp land, 3,000,000 feet of gum timber, in Washington county, \$5.50 per acre, 10 years' time. Washington-Beaufort Land Company, Washington, N. C.

VIRGINIA

VIRGINIA ESTATES.—Colonial homes, plantations, farms, suburban homes, Albemarle pippin orchards, timber lands. Write us for what you want. We have it. R. N. Flanagan & Co., Charlottesville, Va.

FOR A CATALOGUE of the best properties of every description in Piedmont or Northern Virginia, and in the healthiest section of the United States, call on or write to A. W. Pulliam, Culpeper, Va.

BUSINESS OPPORTUNITIES

\$75 STARTS you in business, selling our adjustable form units for building any size and shape concrete culverts. Cheaper than any other forms. Frick Mfg. Co., Fricks, Pa.

FLORIDA ORANGE GROVE FOR \$99.—Five minutes' walk from street car to Pensacola, a city of 30,000. 25 cents reserves a grove and brings full particulars with photo album of twenty colored views. Send today, as groves are limited. National Land Sales Company, Box 625, Pensacola, Fla.

HOTEL TO FINANCE.—We want to correspond with a man or men who can put \$200,000 to \$400,000 with \$100,000 home money in a hotel in this city. No such here now. Nethery & Co. Austin, Texas.

I DESIRE to correspond with a builder, contractor or architect who can build and finance a 50 or 60-room concrete hotel (we have fine concrete sand here on the ground) and take a first mortgage or a 6 per cent. first mortgage bond on the property upon which the hotel is built, and the building. In payment. The hotel ground is worth \$10,000, is water-front property, and located right at the famous Espiritu Santo Springs. Address W. E. Sinclair, Safety Harbor, Fla., for full particulars.

HALF INTEREST in a splendid growing business at an exceedingly reasonable figure to right man who can take an active interest; must be capable, reliable, and have from \$5000 to \$10,000 to invest; salary to begin with, \$100 per month; enterprise thoroughly established and has made 25 per cent. on capital stock during past six months. Give reference with first letter. Address Drawer 550, Bristol, Tenn.

FOR SALE OR TRADE.—A going eye-bee factory; will inventory \$30,000; will sell for cash or take one-half cash and balance in improved Southern land. For further particulars address L. E. Fricke, Cashier North Side Bank, Evansville, Ind.

FOR SALE.—Civil and municipal engineering business, well established, seven years, in growing Southern city of 11,000 population; annual business, \$100,000 to \$200,000; good-will and six months' personal assistance goes with sale; \$3000 cash. Other work engages my time. Good field and opportunity for wide-awake man. Reference asked and given. Address No. 1762, cure Manufacturers Record, Balto., Md.

EXCEPTIONAL SMALL BANK OPPORTUNITY in most rapidly developing section Gulf States. Purchaser required live in the town. Transaction confidentially negotiated. Southern Locaters, Box 1075, Mobile, Ala.

HAVE A LARGE residential lot subdivision containing two thousand lots adjoining the city of Tampa, Fla. Am desirous of placing this subdivision in the hands of a large selling company, one who will get quick results; prices will be reasonable; improvements will be guaranteed and title perfect. Will pay a commission of 25 per cent. Thos. C. Hammond & Co., 4 and 5 Giddens Bldg., Tampa, Fla.

COLLEGES AND SCHOOLS

RENSSELAER POLYTECHNIC INSTITUTE, TROY, N. Y.—Courses in Civil, Mechanical, Electrical and Chemical Engineering and General Science, leading to the degree of Civil Engineer (C.E.), Mechanical Engineer (M.E.), Electrical Engineer (E.E.), Chemical Engineer (Ch.E.), and Bachelor of Science (B.S.). Also special courses. Splendidly equipped new engineering laboratories. Send for catalogue to Registrar.

CAPITAL WANTED

FLORIDA CATTLE RANCH.—Correspondence is solicited from party with \$37,500 for ½ interest in a ranch for raising and fattening cattle. J. M. Wilson, Jr., Kissimmee, Fla.

WANT TO BORROW \$35,000 on Ft. Thompson Park, one of the most beautiful estates in the South. Five years' time \$35,000. Ice and electric plant \$10,000. Hotel and residences, 3100 acres of the best land in the State. Wish to further develop this property. E. E. Goodno, La Belle, Fla.

INTEREST IN COAL-MINING COMPANY FOR SALE

AN UNUSUAL OPPORTUNITY to secure an interest in a splendidly equipped operation in the Pocahontas field, working the original No. 3 seam, 5 feet thick. The management is in the hands of the wealthiest and most successful operators in the field. Over \$400,000 has been spent on the improvements, and the works have never lost a day for want of orders. The large stockholders and directors represent a tonnage of several millions annually and a wealth of many millions of dollars.

Particulars as to the directors and stockholders will be furnished to bona-fide interested parties.

The unusual conditions prevailing for the past year compels the owner (a non-resident) to sacrifice the stock, which will be sold for \$50 per share, par value \$100, and it cost that. Terms easy; \$10 per share down and \$10 per share per month. Certificates in one-share lots or any number. Brokers protected. Address No. 1694, cure Manufacturers Record, Balto., Md.

WHERE TO SPEND THE SUMMER, MOUNTAIN—LAKE—SEASHORE

ROCKPORT, MASS.—Cottages with modern improvements and grand ocean view to let, \$300-\$800 season. Camps, \$100 up. Miss Thurston, 20 Pleasant St.

PATENT ATTORNEYS

PATENTS.—Herbert Jenner, patent atty. and mechanical expert, 606 F St., Washington, D. C. I report free of charge if a patent can be had and its exact cost. Send for circular.

MONEY IN PATENTS.—I secure your patent or return my fee. Manufacturers want Mills patents. Write for free booklet, "How to Get Your Patent and Make Your Profits Thereon." I assist in selling your patent. Mansell F. Mills, Registered U. S. Patent Att'y, 253 Comm. Nat. Bank Bldg., Washington, D. C.

Classified Opportunities

EUGENE C. BROWN, ENGINEER AND PATENT LAWYER, Suite 40 Victor Bldg., Washington, D. C. Graduate Engineer, Lehigh University. Member Bar U. S. Supreme Court. Patents and Trade-Marks. Inventions considered from an engineering standpoint to determine their breadth in covering equivalent constructions and extent of monopoly, and from a legal standpoint in framing adequate claims to protect such monopoly against infringement. Over 20 years devoted exclusively to patent matters; over 9 years Examiner in U. S. Patent Office. Patents secured; infringement suits conducted in all courts; reports upon validity, scope and infringement of patents; send sketch and description of invention.

VALUABLE INVENTIONS justify only best legal service. Consult Vernon E. Hodges, Attorney-at-Law, Barrister Bldg., Washington, D. C. Practice before the U. S. Supreme Court; all Circuit Courts; Courts of the District of Columbia, and the U. S. and Foreign Patent Offices exclusively. Continuous practice since 1886. Extensive experience with all classes of invention, representing lawyers, manufacturers and inventors in every State.

EDWARD BRUCE MOORE, sole office, 159 Barrister Building, Washington, D. C. Head of United States Patent Office and Commissioner under Presidents Roosevelt, Taft and Wilson, and Assistant Commissioner under President McKinley. Do not waste money for patents procured by unknown and incompetent attorneys. They are worthless, and manufacturers and investors will not buy them nor do they fully protect your invention. Consult an expert known throughout the patent world. A known attorney's name on your patents adds value. Costs no more to be safe.

PATENTS THAT PROTECT AND PAY. Advice and books free. Highest references. Best results. Promptness assured. Trade-marks registered.

Watson E. Coleman, Patent Lawyer, 624 F St., Washington, D. C.

"WORDS OF VALUE TO INVENTORS" sent free; should be carefully read before applying for patents. John H. Woodworth, Registered Atty., Ward Bldg., Wash., D. C.

PATENT YOUR IDEAS.—\$900 offered for certain inventions; book, "How to Obtain a Patent" and "What to Invent" sent free upon request; send rough sketch for free report as to patentability. We advertise your patent for sale at our expense. Chandler & Chandler, patent attorneys, 978 F St., Washington, D. C.

C. L. PARKER, Patent Lawyer, formerly Member Examining Corps, U. S. Patent Office, 924 G St., Washington, D. C. Patents secured. Patent suits conducted. Reports on the patentability of inventions, the scope and validity of patents, and whether any process or machine infringes existing patents. Reference to prominent manufacturers and pamphlet of instruction furnished upon request.

PATENTS secured or Fee returned. Send sketch for free report as to patentability. Guide book and what to invent, with valuable list of inventions wanted, sent free; \$1,000,000 offered for inventions. Patents secured by us advertised free in World's Progress; sample free. Victor J. Evans & Co., 12 Ninth St., Washington, D. C.

INDUSTRIES WANTED

COTTON FACTORY

WANTED—Cotton factory; have splendid location; fat bonus to right party. Wm. Fitzsimmons, Tullahoma, Tenn.

MISCELLANEOUS

WATER and railroad facilities can be had here. Labor is plentiful. The best of schools, churches and shipping facilities. We have an attractive proposition to new industries. If interested, write us. Pocumoke City Board of Trade, Pocumoke City, Md.

LOCATE YOUR PLANT IN MARION, NORTH CAROLINA. Complete railway facilities. Raw material. Cheap fuel. Good labor. Ideal climate. For further particulars address The Board of Trade, Marion, N. C.

WAREHOUSE OR FACTORY BUILDING FOR LEASE

FOR LEASE—Warehouse or factory building (on two R. R. tracks, capacity 12 cars), 30,000 sq. ft. floor space; electric elevator, two large boilers, one large Corliss engine, air compressor, well heaters, etc.; 50,000 gallon steel tank; fine for mixed-feed plant, warehouse or general manufacturing purposes. Churchill & Co., Agents, 55 Madison, Memphis, Tenn.

FACTORY SITES

VALUABLE MANUFACTURING SITE, nine miles from Charlotte, N. C. with long frontage on two competitive railroads, electric power line, large stream of pure clear water through the land. Tract contains 141 acres. Will sell all or any part on reasonable terms. Want \$60,000, first mortgage, on two spinning mills, worth \$150,000. Interstate Improvement Co., Charlotte, N. C.

BALTIMORE FACTORY AND TERMINAL SITES.—Statement of Asa G. Candler, President The Coca-Cola Co.: "Investigation convinced us that Baltimore is not only the commercial metropolis for Southern trade, but that it affords shipping opportunities both by water and rail for domestic and foreign traffic superior to any of the great cities in any section of the United States." Locate in Baltimore and derive these advantages. We can provide accommodations to meet your requirements. Wm. Martien & Co., 3 N. Calvert St., Baltimore, Md.

INDUSTRIAL PLANTS FOR SALE

BRICK MANUFACTURING PLANT

FOR SALE OR LEASE on liberal terms, vitrified brick manufacturing plant located in the South; modern equipment; capacity 50,000 daily; lowest rates on all Southern points. Address Wm. Pannill, Agent, Heard Building, Jacksonville, Fla.

ELECTRIC LIGHT PLANT

ELECTRIC LIGHT PLANT, located in Western Missouri, now serving population of 800, which will be increased to 1500 within six months by addition of short transmission lines; everything new and modern; in operation two months and now showing profit. Any reasonable terms given. Best of reasons for selling. Address No. 1763, care Manufacturers Record, Balto., Md.

FURNITURE INTERIOR TRIM PLANT

FURNITURE, PANEL, INTERIOR TRIM PLANT.—For quick sale, the best factory in the South for manufacture of panel, furniture or interior trim. Special advantages in rates, taxes, labor, raw material, both yellow pine and hardwoods. Plant is new, fireproof, and insurance rate is 66 cents per \$100. Sale price is less than half the cost. Write for particulars and photographs. J. P. Mulherin, Trustee, Augusta, Ga.

MISCELLANEOUS

FOR SALE—50-bbl. flour and feed mill, elevator, pancake factory, wholesale hard wheat flour, and coal business; brick buildings; run by electricity; doing good business; two railroads and interurban line; ill-health absolutely only reason for selling. Neill & Van Valer, Jonesboro, Ind.

MODELS

MODELS MADE FOR INVENTORS.—General machine work. Designing and perfecting. Developing automatic devices and machinery. In a position to do all kinds of light tool and machine work. Prices reasonable. Estimates cheerfully given. Ideal Machine Works, 64 Ann Street, New York City.

MANTELS AND TILE FLOORS

NORTHCROSS WOOD MANTELS AND TILE FLOORS for every purpose. Sold direct from factory to your home. All orders receive prompt attention. Every contractor should have a copy of our new catalog showing the largest line in America. Mailed free. W. J. Northcross Mantel Company, 73 Union Ave., Memphis, Tennessee.

MEN WANTED

ARE YOU LOOKING FOR A GOOD MAN? There are a number looking for you. You can get together through an advertisement in these columns. Try it. For rates and other information see block at head of department.

AGENTS WANTED among supply dealers and salesmen for an exceptional house-lighting machine, suitable for small homes as well as large; simple, durable, economical; satisfaction guaranteed to customers; has excellent selling points; a live proposition. Write for terms. The Alexander N. Milburn Co., Baltimore, Md.

FIRST-CLASS JOINERS wanted at Newport News Shipbuilding and Dry Dock Company, Newport News, Va.

FARM AND TIMBER SALESMAN to work Northern and Western territory. Have good proposition to offer right man. References given and required. Chas. B. Harman, Gainesville, Fla.

AGENTS—Salary or commission. Greatest seller yet. Every user pen and ink buys on sight. 200 to 500 per cent. profit. One agent's sales \$620 in six days; another \$32 in two hours. Monroe Mfg. Co., X-130, La Crosse, Wis.

EFFICIENCY SOCIETY OF AMERICA, Pittsburgh, Pa., require State secretaries and special organization agents throughout the Southern and Southwestern States. Liberal compensation arranged.

REPRESENTATIVES to cover territory more thoroughly. Boiler-room necessities; liberal commissions; old-established house. Apply by letter. H. F. Maurel, 524 West 22d St., New York City.

IF QUALIFIED for executive, technical, mechanical, professional or administrative position carrying salary between \$2500 and \$12,000, write undersigned counsel, through whom strictly confidential preliminaries will be negotiated for important appointments. Send address only for prefatory details. R. W. Bixby, Lock Box 134-14, Buffalo.

PARTNER WANTED

WANTED—Partner with \$4000 to install electric-light plant in growing town in Florida. Box 614, Lakeland, Fla.

AGENCIES WANTED

MANUFACTURERS of power, heating, ventilating and general equipment have a big advantage if their salesmen are engineers. We would be glad to represent one or more high-class concerns in Atlanta and adjacent territory. Address No. 1760, care Manufacturers Record, Balto., Md.

WANTED—Sales agency for all lines pertaining to builders' specialties; East Tennessee as territory; can furnish satisfactory references to interested concern; modern warehouse facilities. Address Daniel Briscoe, Jr., 325-327 State St., Knoxville, Tenn.

SITUATIONS WANTED

EXPERIENCED wood turpentine operator desires position; ten years' experience building and operating plants, understands business thoroughly, and can furnish good references as to ability and integrity. Address No. 1761, care Manufacturers Record, Balto., Md.

LETTERHEADS, PRINTING, ETC.

LITHOGRAPHED Letterheads; at low cost—\$500, \$2 per M; 10,000, \$1.75 per M; 25,000, \$1.40 per M. Nominal engraving charge on 1st order; quality guaranteed. Write for samples on your own letterhead. Monach Lithographing Co. (Dept. E), Minneapolis, Minn.

EMBOSSED LETTERHEADS, TOKYO BOND PAPER, 1000, \$4.00. Envelopes to match, \$4.00 for the 1000. We use 20-lb. to the ream paper. Send for samples. Turner & Dunlap, Wilkes-Barre, Pennsylvania.

5000 LITHOGRAPHED letterheads, \$13.75; good bond paper; quality guaranteed; no charge for engraving; samples upon request. The Art Press, Dept. A, Lima, Ohio.

ATTRACTIVE STATIONERY at moderate prices. Send for our free sample booklet "M" and price-list of effective, economical letterheads. Commercial Art Press, Beaver Falls, Pa.

REBUILT TIME AND COST KEEPING RECORDERS

TIME CLOCKS, Dey and International bi-chrome machines, calculagraphs, cost-keeping recorders; everything in time clocks and supplies. R. G. Watkins, 9 Church St., N.Y. City.

DUPLICATING MACHINES

MULTIGRAPH (duplicating and printing machines), \$200; cost \$600. Smaller model cheaper. Universal folding machines at half cost. All guaranteed. Will ship for trial. Russell Baum, Phila. Bourse, Phila., Pa.

MACHINERY AND SUPPLIES

GRANULATED CORK

FOR SALE—50 tons pure granulated cork, cheap. Apply New Orleans Cold Storage & Warehouse Co., Ltd., New Orleans, La.

NAILS

NEW NAILS.—Have several hundred kegs of various sizes of cut and wire nails. Attractive price in any quantity. Address L. A. Green, 1512 First Natl. Bank Bldg., Pittsburgh, Pa.

STRUCTURAL STEEL

FOR SALE—Salvaged, about 200 tons structural steel; 12 and 15-inch channels and I beams, 30 to 40 ft. lengths. Specifications on request. Mather, Hess & Mather, Coconut Grove, Fla.

PROPOSALS

UNITED STATES CAPITOL, Washington, D. C., May 6, 1915. Sealed proposals, in duplicate, for the following fuel for the United States Capitol power plant for the fiscal year ending June 30, 1916, will be received at the office of the Superintendent, U. S. Capitol Building and Grounds, until two o'clock P. M. on the first day of June, 1915, and at that hour opened in the presence of those bidders who elect to be present, viz.: 25,000 tons, more or less, of bituminous coal. Bidders must specify names of coal and location of mines from which obtained. All coal to weigh 2240 pounds to the ton, and to be delivered on the siding of the Capitol power plant, situated in Garfield Park, Washington, D. C., at such times and in such quantities as may be ordered by the undersigned. All coal will be inspected and weighed by a government inspector, designated by the undersigned, for which no charge will be made to the contractor. Each proposal must be accompanied by a certified check for \$100, payable to order of the Superintendent U. S. Capitol Building and Grounds, to be forfeited to the United States upon refusal or failure of the bidder to enter into any contract within 10 days after being required to do so. Checks will be immediately returned to unsuccessful bidders, and to successful bidder upon execution of contract in accordance with these specifications and filing of bond for faithful performance of the conditions thereof, with satisfactory sureties. All coal must be shipped in self-cleaning hopper-bottom cars. If the contractor delivers coal in cars of a type other than that heretofore described, the Superintendent reserves the right under conditions existing at that time to charge against the contractor the excess cost of handling the coal with the present equipment at the power plant. The government will take all necessary steps for testing, technically and practically, all the coals proposed. In event of delivery of contractor of unsatisfactory fuel, the undersigned may buy coal in open market, and excess in cost over contract price will be charged against the contractor. The right is reserved to reject any or all proposals. Bids should be indorsed "Proposals for Coal," and addressed to the Superintendent U. S. Capitol Building and Grounds. By order of House Office Building Commission. ELLIOTT WOODS, Superintendent U. S. Capitol Building and Grounds.

PROPOSALS FOR STEEL SHAPES AND Plates, Cold-rolled Steel, Steel and Iron Castings, Wrought Iron and Steel Pipe, Bolts, Boat Spikes, Turnbuckles, Wire Netting, Steel Wire, Anchors, Chain, Ship Augers and Bits, Mattocks, Wheelbarrows, The U. S. Engineer Offices in the following cities: Seattle, Wash.; Los Angeles, Cal.; Baltimore, Md.; Philadelphia, Pa.; Pittsburgh, Pa.; Boston, Mass.; Buffalo, N. Y.; Cleveland, Ohio; Cincinnati, Ohio; Chicago, Ill.; St. Louis, Mo.; Detroit, Mich.; Milwaukee, Wis.; St. Paul, Minn.; Chattanooga, Tenn.; Louisville, Ky.; Mobile, Ala., and Galveston, Tex.; Commercial Club, Kansas City, Mo.; Chamber of Commerce, Quincy, Ill., and Commercial Club, Tacoma, Wash. F. C. BOGGS, Major, Corps of Engineers, U. S. A., General Purchasing Officer.

TREASURY DEPARTMENT, Supervising Architect's Office, Washington, D. C., May 21, 1915. Sealed proposals will be opened in this office at 3 P. M. July 2, 1915, for the construction, complete (including mechanical equipment and approaches), of a two-story-and-basement stone and brick-faced building of 17,000 square feet ground area, fireproof construction, composition and copper roof, for the United States postoffice and courthouse at Charlotte, N. C. Drawings and specifications may be obtained from the custodian of the site at Charlotte, N. C., or at this office, in the discretion of the Acting Supervising Architect. JAS. A. WETMORE, Acting Supervising Architect.

(CONTINUED ON NEXT PAGE.)

PROPOSALS

BOND ISSUES

BUILDINGS

PAVING

GOOD ROADS

PROPOSALS, ANNUAL ESTIMATE FOR the period ending June 30, 1916, for Lubricating Oils and Greases, including Valve Oil, Air-compressor Cylinder Oil, Marine-engine Oil, Stationary-engine Oil, Locomotive-engine Oil, Car Oil, Non-liquid Oil or Grease, Cup Grease, and Black Gear Grease, and Gasoline. Sealed proposals will be received at the office of the General Purchasing Officer, The Panama Canal, Washington, D. C., until 10:30 A. M. June 12, 1915, at which time they will be opened in public, for furnishing the above-mentioned articles. Blanks and general information relating to this Circular (No. 931) may be obtained from this office or the offices of the Assistant Purchasing Agents, 24 State Street, New York City; 614 Whitney-Central Building, New Orleans, La., and 1085 North Point Street, San Francisco, Cal.; also from the U. S. Engineer Offices in the following cities: Seattle, Wash.; Los Angeles, Cal.; Baltimore, Md.; Philadelphia, Pa.; Pittsburgh, Pa.; Boston, Mass.; Buffalo, N. Y.; Cleveland, Ohio; Cincinnati, Ohio; Chicago, Ill.; St. Louis, Mo.; Detroit, Mich.; Milwaukee, Wis.; St. Paul, Minn.; Chattanooga, Tenn.; Louisville, Ky.; Mobile, Ala.; and Galveston, Tex.; Commercial Club, Kansas City, Mo.; Chamber of Commerce, Quincy, Ill., and Commercial Club, Tacoma, Wash. F. C. BOGGS, Major, Corps of Engineers, U. S. A., General Purchasing Officer.

\$41,000 5% Bonds

The Board of Sewer Commissioners of the First Sewerage District of the Town of De Ridder, Louisiana, will receive sealed bids until 10 A. M. May the 29th, 1915, for \$41,000 of 20-year 5 per cent. sewerage bonds in \$500 denomination. Dated May the 1st, 1915, and due serially from May 1, 1916, to May 1, 1935. Interest payable annually. No bids will be accepted for less than par value. The right to reject any and all bids is hereby reserved. Each bid must be accompanied by a certified check for \$500.

J. E. McMAHON,

Prest. Sewer Board,
De Ridder, La.

\$24,000 5% Bonds

The Mayor and Board of Aldermen of the Town of De Ridder, Louisiana, will receive sealed bids until 10 A. M. May the 29th, 1915, for \$24,000 of 20-year 5 per cent. water bonds in \$500 denomination. Dated May 1, 1915, and due serially from May 1, 1916, to May 1, 1935. Interest payable annually. No bids will be accepted for less than par value. The right to reject any and all bids is hereby reserved. Each bid must be accompanied by a certified check for \$500.

J. M. COX,
Mayor of the Town of De Ridder, La.

\$10,000 6% Bonds

Commissioners Moore County, North Carolina, will receive bids up to June 7, 1915, for purchase \$10,000 coupon bonds, bearing six per cent. interest annually, payable office Treasurer, Carthage, N. C.; \$2000 payable five years from date and \$2000 each year thereafter; issued for purpose building County Home. Send bids with certified check \$200 to undersigned.

U. L. SPENCE,
Carthage, N. C.

\$90,000 5% Bonds

Bids will be received until 2 P. M. June 16, 1915, by the Mayor and City Recorder of the City of Cleveland, Tenn., for \$90,000 5 per cent. bonds, proceeds of same appropriated as follows: \$75,000 for Sewer System and \$15,000 for the erection of a City Hall and equipping fire department.

No bid less than par can be considered. Certified check to the amount of \$500 must accompany each bid. For particulars write

ELMO BARTLETT, City Recorder,
Cleveland, Tenn.

\$20,000 6% Bonds

West Point, Miss., May 7, 1915.

Sealed bids will be received up to 2 o'clock P. M. June 7, 1915, by the Board of Supervisors of Clay County, Mississippi, for the issue of \$20,000 6 per cent. District Two Road Bonds of said county, interest payable semi-annually in New York. Said bonds are exempt from taxation. Certified check for \$250 to accompany each bid. The Board reserves the right to reject any or all bids.

L. J. HOWARD,
Clerk of the Board of Supervisors.

\$35,000 Bond Sale

Washington, N. C.

The city of Washington, North Carolina, will open bids on June 15, 1915, for the sale of \$35,000 Municipal Improvement Bonds, interest payable semi-annually on the first days of July and January. Bonds mature January 1, 1963. Assessed valuation, \$2,700,000; actual estimated valuation, \$5,000,000; bond debt, \$370,000.

Address all bids to W. C. Ayers, City Clerk. For further information apply to H. C. Carter, Jr., City Attorney.

PROPOSAL ADVERTISING INFORMATION

RATE: 20 cents per line per insertion.

PUBLICATION DAY: Thursday.

FORMS CLOSE 9 A. M. Wednesday. Copy received later cannot be published until issue of following week.

NIGHT LETTER: When too late to send copy by mail to reach us by 9 A. M. Wednesday, forward by night letter.

THE DAILY BULLETIN OF THE MANUFACTURERS RECORD:

Published every business day: gives information about the industrial, commercial and financial activities of the South and Southwest.

The Daily Bulletin can be used to advantage when copy cannot reach us in time for publication in the Manufacturers Record before bids are to be opened, or when daily publications are necessary to meet legal requirements.

The same rate applies—20 cents per line per insertion.

\$58,000 5% Bonds

Fort Meade, Fla., May 12, 1915.

The Board of Bond Trustees of Fort Meade, Fla., will, up to and until noon of June 15, 1915, receive bids for \$58,000 issue of Street Paving, Electric Light and Water and Sewer Bonds. Bonds mature May 1, 1945. Interest at the rate of 5 per cent. per annum, payable semi-annually. Right is reserved to reject any or all bids. No bids considered unless accompanied by certified check for \$500 as evidence of good faith.

For further information address J. J. Singleton, Secy., Fort Meade, Fla.

\$4500 6% Bonds

FALLING SPRING CORPORATION ROAD BONDS.

Renick, W. Va.

Sealed proposals will be received by the Council of the Town of Renick, at their office, up to noon on the 15th day of June, 1915, for the purchase of forty-five six per cent. 20-year coupon bonds, optional after 10 years, interest payable annually on the first day of July. Bonds to be in denomination of \$100 each.

Each bid must be accompanied by a certified check of \$100 and addressed to the undersigned.

The right to reject any and all bids is reserved.

W. P. LOWE, JR.,
Chairman of Bond Committee.

\$50,000 5% Road Bonds

OF DE WITT COUNTY ROAD DISTRICT NO. ONE.

Cuero, Texas.

Sealed proposals will be received by the Commissioners' Court of De Witt County, Texas, in the City of Cuero, Texas, until June 1, 1915, at 2 o'clock P. M., for the purchase of \$50,000 road bonds of Road District No. One of De Witt County, Texas.

Said bonds will bear date March 1, 1915, of the denomination of \$500 each, bearing 5 per cent. interest, payable semi-annually on the first days of September and March of each year. Said bonds mature forty years from their date, but may be redeemed at any time after twenty years. Principal and interest payable at Cuero, Texas; Austin, Texas, or New York City, New York, at the option of the holder.

All bids must be addressed to "Commissioners' Court of De Witt County, Cuero, Texas," and a certified check for \$150 must accompany bid. The right to reject any and all bids is reserved.

R. J. WALDECK,
County Judge.

\$50,000 5% Bonds

Sealed bids will be received by the Board of Town Commissioners of Hertford, North Carolina, up to 7:30 o'clock P. M. on June 8, 1915, and then opened, for the purchase of bonds of the Town of Hertford in the sum of fifty thousand dollars (\$50,000), said bonds to bear interest at the rate of 5 per cent. per annum, payable semi-annually on the 1st day of June and on the 1st day of December, respectively, of each year, which interest shall be evidenced by coupons attached to said bonds. Said bonds will mature ten thousand dollars thirty years from date of issue, ten thousand dollars thirty-five years from date of issue, ten thousand dollars forty years from date of issue, ten thousand dollars forty-five years from date of issue, and ten thousand dollars fifty years from date of issue. The purposes for which said bonds are issued are as follows: For water-works, seventeen thousand dollars; for sewerage system, thirteen thousand dollars; for electric-light system, twelve thousand dollars; for street paving, eight thousand dollars. All bids should be addressed to the Board of Town Commissioners of Hertford, North Carolina, and must be accompanied by a certified check, payable to their order, in the sum of five hundred dollars. The bonds are to be prepared and furnished at the expense of the purchaser. The Town of Hertford reserves the right to reject any and all bids.

For further information apply to W. E. White, Mayor, or W. C. Winslow, Clerk, Hertford, North Carolina.

W. E. WHITE, Mayor.
W. C. WINSLOW, Clerk.

\$75,000 5% Bonds

Sealed proposals will be received by the undersigned until June 25, 11 o'clock A. M. (to then be opened and awarded), for the purchase of \$75,000 Road Improvement Coupon 5 Per Cent. Bonds; semi-annual, January 1, July 1, payable New York City; denomination \$1000. Bonds to mature in forty years. The Highway Commission reserves the right to reject any and all bids.

R. A. BURCH, Secy. Highway Com.,
Roxboro, N. C.

\$30,000 5% Bonds

Keyser, W. Va.

Bids for issue of \$30,000 of school bonds will be received until noon June 1, 1915, by the Board of Education of Keyser School District, Mineral county, W. Va.

These bonds are coupons and denominations of \$500 each, a part of which matures each year from 1925 until paid. Said bonds to bear interest at 5 per cent., payable annually.

Bids will be received for all or any part of the issue and must be accompanied by a certified check for 5 per cent. of the bid.

The Board reserves the right to reject any or all bids.

CHAS. N. FINNELL, Pres.
L. B. MCCOOLE,
Sec. B. of E.

\$13,000 4½% Bonds

Spartanburg, S. C.

State of South Carolina, County of Spartanburg.

Sale of Thirteen Thousand Dollars Refunding Coupon Bonds of the City of Spartanburg.

NOTICE.

Sealed bids will be received up to 12 o'clock noon on the 10th day of June, 1915, by the City Council of Spartanburg, at its office in the City of Spartanburg, for the purchase of thirteen thousand dollars, or any part thereof, of refunding coupon bonds of said city. Said bonds payable in twenty years after date, and to draw interest at the rate of 4½ per cent. per annum from their date, interest payable semi-annually on the first days of January and July of each year thereafter, principal and interest to be payable at the National Park Bank, New York. A certified check without limitation by a responsible bank for 5 per cent. of the amount of the bonds bid for, payable to the order of the City Treasurer, is required to accompany each bid. The city reserves the right to reject any or all bids.

J. F. FLOYD,
Mayor.Attest:
T. J. BOYD,
City Treasurer.

\$256,000 6% Bonds

Bartow, Fla.

The Peace Creek Drainage District will, on the 15th day of June, 1915, at 2 P. M., at the office of the said district, 77 Main street, Bartow, Florida, offer for sale Drainage Bonds in the sum of \$256,000, dated April 10, 1915, and maturing serially as follows: \$10,000 April 10, 1921; \$12,000 April 10, 1922; \$12,000 April 10, 1923; \$13,000 April 10, 1924; \$14,000 April 10, 1925; \$15,000 April 10, 1926; \$16,000 April 10, 1927; \$17,000 April 10, 1928; \$18,000 April 10, 1929; \$19,000 April 10, 1930; \$20,000 April 10, 1931; \$21,000 April 10, 1932; \$22,000 April 10, 1933; \$23,000 April 10, 1934; \$24,000 April 10, 1935, bearing interest at the rate of 6 per cent. per annum, payable semi-annually. Reserving the right to retain \$50,000, or any portion thereof, of said bonds, the proceeds of the sale of which may be found unnecessary to complete the plan of reclamation of the said district.

Certified check in the sum of \$5000 must accompany each bid as a guarantee of faithful performance. The right to reject any or all bids is hereby reserved. Data furnished on request.

R. C. HATTON,
E. L. MACK,
LYCURGUS BURNS,
Board of Supervisors,
BENJ. GETZOFF,C. G. ELLIOTT, Chief Engineer,
McLachlen Bldg., Washington, D. C.

\$16,000 6% Warrants

Perry, Fla., May 7, 1915.

Under and by virtue of an Act of the Legislature of the State of Florida, approved May 6, 1915, and by order of the Board of Public Instruction of Taylor County, Florida, passed May 3, 1915, notice is hereby given that said Board of Public Instruction will issue and offer for sale on Monday, June 7, 1915, \$16,000 of interest-bearing coupon county school warrants in denominations of \$100 to \$5000, to suit purchaser, interest at six per cent., payable semi-annually. Sealed bids will be received up to 12 o'clock M. of the above date. The Board reserves the right to reject any and all bids. For further information address F. S. Jackson, Secretary, Perry, Fla., to whom bids may be sent.

Done and ordered by the Board in regular session the 3d day of May, 1915.

J. M. SHEFFIELD,
Chairman.Attest:
F. S. JACKSON,
Secretary.

Sale of \$25,000 Northampton County (Virginia) Road Bonds

By order of the Board of Supervisors of Northampton County, Virginia, sealed bids will be received by Geo. T. Tyson, Clerk of the Board of Supervisors of Northampton County, Virginia, until Tuesday, June 15, 1915, at 12 o'clock M., for all or any part of \$25,000; said bonds to be in denominations of \$500 each, and payable thirty (30) years from date, with coupons attached for the semi-annual payment of interest, which said bonds shall be made redeemable at the discretion of said Board at any time after the expiration of five (5) years from date of issue. Said bidder or bidders shall state at what rate of interest they will furnish said money; said bonds to be dated and money furnished June 30, 1915, and interest to be paid at the office of the Treasurer of said county. The right is reserved by said Board of Supervisors to reject any or all of said bids. These bonds are to be issued for permanent road improvement in Eastville Magisterial District, pursuant to an Act of the General Assembly of Virginia, entitled "An Act to authorize Northampton county to borrow money and issue bonds for a sum not exceeding \$50,000 for the purpose of building, improving and maintaining the public roads in Eastville Magisterial District, in said county," approved March 15, 1915; but the full faith and credit of the entire county of Northampton is to be pledged for their payment, and a tax to be levied upon the property in said Eastville District to pay the interest on them and create a sinking fund sufficient in amount to pay them upon maturity.

GEO. T. TYSON,
Clerk of the Board of Supervisors
of Northampton County, Eastville, Va.
May 12, 1915.

\$210,000 6% Bonds

Arcadia, Fla.

Notice of Sale of Bonds for Special Road and Bridge District No. 1 in DeSoto County, Florida.

Notice is hereby given that the Board of County Commissioners of the County of DeSoto, State of Florida, will receive sealed bids at the Clerk's office in the Court House at Arcadia, Florida, until 2 o'clock in the afternoon on the 8th day of June, 1915, from all purchasers desiring to purchase bonds of Special Road and Bridge District No. 1 in DeSoto County, Florida, authorized and issued by said Board of County Commissioners for said Special Road and Bridge District No. 1 in the sum of \$210,000.

The entire bond issue of \$210,000, or any part thereof, is hereby offered for sale, the same being in denominations of \$500 each, bearing date July 1, 1915, and maturing either 20 or 30 years after date and bearing interest at the rate of 6 per cent. per annum, with the usual interest coupons covering same attached thereto, interest payable semi-annually, and interest and principal payable at the office of, and to, the County Treasurer, Arcadia, DeSoto County, Florida.

The said Board of County Commissioners of DeSoto County, Florida, reserves the right to sell the whole or any part of said bond issue and also to reject any or all bids. Each bidder is required to furnish a certified check, payable to the County Treasurer of DeSoto County, Florida, accompanying bid, for 2 per cent. of the amount of his bid as evidence of good faith. Checks of the successful bidder will be applied on purchase, or, in case of his failure to comply with his agreement of purchase, then and in the event said check and the amount thereof shall be forfeited to the said County of DeSoto as liquidated damages, and said check shall be cashed and the amount thereof received by the County Treasurer immediately upon the acceptance of bid of successful bidder. Each bidder will state the time when he will comply with his bid, and shall also specify whether the bid is in current money or in evidences of indebtedness against said County of DeSoto. Checks of all unsuccessful bidders will be returned to them.

This notice is given by order of the Board of County Commissioners of DeSoto County, Florida, and dated this 13th day of May, A. D. 1915.

A. L. DURRANCE,
Clerk of said Board and of DeSoto
County, Florida.

[Seal.]

PROPOSALS

SEWERS

WATER-WORKS

ELECTRIC LIGHT PLANTS

BRIDGES

\$99,000 5% Bonds

Gastonia, N. C.

Sealed proposals will be received by the Mayor and Board of Aldermen of Gastonia, North Carolina, on Tuesday, June 1, 1915, at 10 o'clock P. M., for \$99,000 of bonds of the City of Gastonia. (Street improvements and extension of water-works system.) Bonds dated May 1, 1914; payable May 1, 1944. Principal and semi-annual interest payable at National Park Bank, New York City. Approving opinion of Storey, Thorndike, Palmer & Dodge of Boston will be furnished by city.

Bonds ready for delivery and are neatly lithographed, \$50,000 in denominations of \$1000 each and \$49,000 in denominations of \$500 each.

Financial Statement.

Assessed valuation (1914), \$3,988,686.
Estimated, \$12,000,000.
Bonded debt (including this issue), \$349,000
Less water debt..... 118,000

Net.....\$231,000
Unlimited tax levy provided for payment of interest and creating sinking fund for retirement of bonds at maturity. Proposals must be accompanied by certified check on some National Bank for 2 per cent. of amount of bid.
For further particulars address
T. A. RATCHFORD, Clerk.

Building for Addition to Mechanical Hall, Morgantown, W. Va.,

Building for School of Medicine, Morgantown, W. Va.

Building for Dormitory, State Normal School, Glenville, W. Va.

Building for Science Hall, Marshall College, Huntington, W. Va.

NOTICE TO CONTRACTORS.

Notice is hereby given that the undersigned State Board of Control will, until noon of Tuesday, June 29, 1915, receive at its office in Charleston, W. Va., sealed bids for doing all the work and furnishing all the materials necessary to complete the following buildings according to the plans and specifications prepared by H. Rus Parne, architect, Charleston, W. Va.:

West Virginia University, Morgantown, W. Va.

No. 1—Addition to Mechanical Hall, size 14x44 feet, one wing 6x44 feet and one wing 5x43 feet; slow-burning construction; three stories; brick and terra-cotta; slate and composition roof.

No. 2—Building for School of Medicine, size 7x55 feet; brick walls; three stories; wood joist construction and composition roof.

Glenville State Normal School, Glenville, W. Va.

Dormitory Building, size 16x50 feet; three stories and basement; brick and stone; slate roof; ordinary construction.

Marshall College, Huntington, W. Va.

Building for Science Hall, 14x79 feet; brick and terra-cotta; three stories; first floor reinforced concrete with composition top finish; second and third floors joist construction; composition roof.

Contractors can secure plans and specifications for any one or more of the above buildings by addressing the office of the State Board of Control, Charleston, W. Va., accompanying their request with two checks of five dollars each for each set of plans and specifications desired. One of said checks will be returned to contractor for each set of plans and specifications returned to the undersigned.

All bids must be accompanied by certified check of five hundred dollars (\$500) for each building on which estimate is made.

Public opening of bids will be held at the office of the State Board of Control at two o'clock P. M. Tuesday, June 29, 1915.

Immediately after contract is awarded successful bidder will be required to execute proper contract with guaranty bond in penalty equal to one-half the amount of contract price. If successful bidder fails to execute contract and bond his check will be retained to cover expense of re-advertising.

All of the above buildings must be entirely completed on or before February 15, 1916.

All bids must be made on forms furnished with the specifications. The State Board of Control reserves the right to reject any and all bids.

J. S. LAKIN, President.
State Board of Control.
Charleston, W. Va.

School

Amory, Miss.

Bids will be received by the City Clerk, Amory, Mississippi, until noon June 8, 1915, for the erection of a brick high school building for the city of Amory, Mississippi, according to plans and specifications on file at the Mayor's office. Plans may be had from Ben Price, Architect, 518-19 Empire Building, Birmingham, Ala., upon deposit of \$15, which will be refunded in full to the first five applicants upon return of plans within five days after date of letting; other applicants will be refunded \$10 upon return of

plans within five days from date of letting contract. A certified check for \$500 to accompany each bid. Right is reserved to accept or reject any and all bids.
H. L. TSCHUDI,
City Clerk.

Road Construction

COUNTY COMMISSIONERS' DISTRICT NO. 4, LAKE COUNTY, FLORIDA.

Tavares, Fla.

Sealed proposals will be received by the Board of County Commissioners of Lake County, Florida, at the office of the County Clerk, in the Courthouse at Tavares, Florida, for the construction of a system of roadways in County Commissioners District No. 4, Lake County, until 12 noon June 7, 1915, at which time they will be opened and read publicly. The work includes the furnishing of all labor, material and machinery and equipment of every kind necessary to construct the roadways according to plans and specifications. The approximate quantities are as follows:

98,973 lineal feet roadway
25,988 cubic yards excavation.
112,024 square yards modified asphalt pavement.
7 bridges to be raised.
50 12" drains.
19,02 cubic yards concrete.
500 pounds steel.

Each bid must be accompanied by a certified check on a State or national bank of Florida, or a national bank of any other State, for 5 per cent. of the amount bid, drawn to the order of the County Clerk, H. H. Duncan.

Plans and specifications may be seen at the office of the County Clerk or the Engineers. Specifications may be obtained from the County Clerk or the Engineers. Copies of plans may be obtained from the Engineers at \$15 per set to cover their actual cost.

The desire of the Board is to let the contract in as large sections as possible. The right is reserved to reject any or all bids.

M. V. SIMPSON, Commissioner.
H. H. DUNCAN, Clerk.
THE J. B. MCCLARY CO., Engineers,
1408-17 Third Natl. Bank Bldg.,
Atlanta, Ga.

State Highway

STATE OF MARYLAND.
STATE ROADS COMMISSION.
NOTICE TO CONTRACTORS.

SOMERSET COUNTY: Contract No. S-8.
Sealed proposals for building one section of State Highway from Marion to Hopewell, about 4.40 miles in length (Concrete), will be received by the State Roads Commission at its offices, 601 Garrett Building, Baltimore, Maryland, until 12 M. on the 15th day of June, 1915, at which time and place they will be publicly opened and read.

Bids must be made upon the blank form contained in the book of specifications. Specifications and plans will be furnished by the Commission upon application and cash payment of \$1, as hereafter no charges will be permitted.

No bids will be received unless accompanied by a certified check for the sum of five hundred (\$500) dollars, payable to the State Roads Commission.

The successful bidder will be required to give bond and comply with the Acts of the General Assembly of Maryland respecting contracts.

The Commission reserves the right to reject any and all bids.

By order of the State Roads Commission this 24th day of May, 1915.

O. E. WELLER,
Chairman.
WM. L. MARCY,
Secretary.

Water-Works Improvements

Plant City, Fla.

Sealed proposals will be received by the Board of Public Works of Plant City, Florida, at the office of the Clerk, until the fifth day of June, 1915, for furnishing all material and machinery for water-works improvements, at which time they will be opened and read publicly.

The approximate quantities are as follows:

Station Equipment, Plan No. 1.
1 1,500,000-gallon Compound Condensing Pumping Engine.
1 300 cubic feet Compound Condensing Two-Stage Air Compressor.
1 100 H. P. Boiler, steel casing.
1 200 H. P. Open Heater.
1 Feed Pump.
1 Air Lift.

Station Equipment, Plan No. 2.
2 50 H. P. Oil Engines, direct connected to 2 500 G. P. M. Triplex Pumps.
1 50 H. P. Oil Engine, belt connected to 1 300 cu. ft. Two-Stage Air Compressor.

1 10,000-gallon Steel Oil Storage Tank.
Station Equipment, Plan No. 3.
1 100 H. P. Oil Engine, direct connected to 1 1000 G. P. M. Triplex Pump.

1 10,000-gallon Steel Oil Storage Tank.
Each bid must be accompanied by a certified check for five per cent. of amount bid, drawn to the order of J. L. Young, Chairman.

Specifications may be obtained from E. W. Mays, Superintendent Water-works, Plant City, Fla.
The right is reserved to reject any or all bids.

J. L. YOUNG,
Chairman Board of Public Works.

Paving and Sewers

Clarksville, Texas.

Sealed proposals will be received by the Board of Aldermen of the City of Clarksville, Texas, at the City Hall, until 8 P. M. Monday, May 31, 1915, and publicly opened and read immediately thereafter, for furnishing all materials therefor and constructing certain street improvements in the said city. The following items represent approximately the work to be done:

1. Excavation for grading, 5112 cu. yds.
2. Vertical Fiber Brick Pavement on Concrete base, 13,531 sq. yds.
3. Asphalt Macadam Pavement, 7230 sq. yds.
4. Concrete Pavement, 1897 sq. yds.
5. Plain Concrete Curb, 8410 lin. ft.
6. Combined Concrete Curb and Gutter, 7068 lin. ft.
7. 10" Vitrified Pipe Sewer, 305 lin. ft.
8. 12" Vitrified Pipe Sewer, 60 lin. ft.
9. 15" Vitrified Pipe Sewer, 44 lin. ft.
10. 18" Vitrified Pipe Sewer, 370 lin. ft.
11. Stone Headers, 1300 lin. ft.
12. Catch-Basins, 8.

Certified check required with each bid, \$4000, on any bank in the City of Clarksville, Texas.

Plans and specifications are on file at the office of the City Clerk, or can be had from the Engineer upon payment of \$15 for same, half of which amount will be refunded upon safe return of plans and specifications.

Or specifications alone can be had upon payment of \$5, half of which amount will be refunded upon safe return of specifications. The city reserves the right to reject any and all bids.

C. E. TERRY, Mayor.
JOHN WEBB, City Clerk.
E. F. PETERSEN, Engineer,
Muskogee, Okla.
JNO. W. O'NEILL,
W. P. CORNELIUS,
E. L. CANTERBURY,
Improvement Committee.

Paving and Sewers

Knoxville, Tenn., May 21, 1915.

Sealed proposals or bids addressed to the City Recorder, Knoxville, Tennessee, will be received by the Board of Commissioners of the City of Knoxville until 12 noon Friday, June 4, 1915, for paving, grading, curbing, etc., as required by the plans, profiles and specifications prepared by the City Engineer for the following Improvement Districts:

Numbers 103, 105, 107, 108, 109. Total approximate quantities: 25,000 square yards paving; 15,000 cubic yards of grading; 10,000 lineal feet storm sewer, and other miscellaneous items. Said work to be done under the abutting property law of Tennessee, Chapter 273 of the Acts of 1905, and the amendments thereof, and the ordinances creating said districts passed by the Board of City Commissioners.

Separate bids may be submitted for the grading, curbing and storm sewers. All bids must be accompanied by bid bonds in the penal sum of ten per cent. of the cost of the work, computed upon the basis of the bid submitted.

Plans, profiles, specifications and proposal sheets can be had upon application to J. B. McCalla, City Engineer, at the City Hall. The right is reserved to reject any and all bids.

By order of the Board of Commissioners.
JOHN W. FLENNIKEN,
Commissioner of Streets.
D. G. LEAHY,
Recorder.

Water-Works and Sewers

Sealed bids will be received by the Town of Northport, Alabama, until 2 o'clock P. M. Tuesday, June 1, 1915, for furnishing materials and installing a complete water-works plant and sewer system. The water-works plant includes one 80,000-gallon steel or concrete pressure tower and tank, 80,000-gallon receiving tank, 500-gallon motor-driven pump, 12 fire hydrants, 3800 feet of 8" cast-iron pipe and 4900 feet of 6" cast-iron pipe, 2" and 1½" galvanized pipe, valves, etc., pump-house. Sewer system will consist of 3000 feet of 10" and 3700 feet of 8" terra-cotta pipe, 15 manholes and 5 lamp holes.

Detailed plans and specifications can be seen at the office of Dr. C. P. Bell, Mayor, Northport, Ala., or at the office of Edgar B. Kay, Engineer, Tuscaloosa, Ala. Bidding sheets and instructions can be obtained at the office of the engineer.

EDGAR B. KAY, Engineer,
Tuscaloosa, Ala.
DR. C. P. BELL, Mayor,
Northport, Ala.

Steel Wharf Sheds

Port Commission of Jacksonville,
Office of Chief Engineer.

Jacksonville, Fla., May 15, 1915.

Sealed proposals for the furnishing of material and erection of steel wharf sheds on the Municipal Piers at Jacksonville, Florida, will be received by the Port Commission of Jacksonville until noon June 10, 1915, and then publicly opened.

Information and plans may be obtained at the office of the Engineer of the Commission at Room 314 Realty Building, Jacksonville, Florida.

The Commission reserves the right to reject any or all bids or waive any informalities in bids received.

F. W. BRUCE,
Chief Engineer.

Bridge

Bryson City, N. C.

Bids will be received until 1 P. M. June 7, 1915, at Bryson City, N. C., by the "Swain Highway Commission" for the construction of a 300-ft. bridge over the Tuckasegee River. Bids will be received separately on a steel bridge and a concrete structure, the commission reserving the right to accept either or reject any or all bids. For further information apply to T. M. Howerton, Engineer.

Notice To Dredge Contractors

Trenton, Tenn.

Until noon on June 9, 1915, we will receive sealed bids, at the office of the County Court Clerk at Trenton, Tennessee, for excavating by dredgeboat of approximately 1,158,386 cubic yards of earth; to be bid on in two sections and as a whole. For specifications address the undersigned W. W. Powers, County Judge.

Trenton, Tennessee, May 10, 1915.
W. W. POWERS,
R. K. LOUGHLIN,
K. E. WITHERSPOON,
Directors Drainage District No. 2,
Gibson County.

Heating and Ventilating

Apalachicola, Fla.

All bids for the installation of the heating and ventilating outfit for the new school at Apalachicola, Fla., having been rejected, the Board of Public Instruction of Franklin County, Fla., will receive other sealed proposals therefor until noon of Thursday, June 3, 1915. Plans and specifications can be consulted at the office of the Board of Public Instruction at Apalachicola, Fla., or at the office of its architect, C. F. Streeter, 513 West Bldg., Jacksonville, Fla. Bidders desiring copies of plans and specifications from which to figure elsewhere will be required to deposit five dollars with the architect, one-half of which will be refunded on return of plans in undamaged condition.

A. A. CORE,
Secy. of Board and Supt. Pub. Inst.

Dam

Sealed proposals will be received at the office of the City Secretary, Temple, Texas, up to 5 P. M. June 8, 1915, for furnishing material and constructing a gravity dam across the Leon River to be used in connection with the water-works system of the City of Temple, Texas, in accordance with the plans and specifications on file in the office of the City Engineer, Temple, Texas.

A certified check for \$1000, payable to the order of Mayor of City of Temple, Texas, must accompany each bid.

Anyone desiring to secure a set of plans for personal use in preparing or submitting a bid may obtain the same by application to the Engineer and the payment of \$3 to cover cost of same.

The right reserved to reject any and all bids.

J. T. MARTIN,
Secretary City of Temple, Texas.

Boilers and Appurtenances

New Orleans, La.

Sealed proposals will be received by the Board of Commissioners of the Port of New Orleans at the office, Suite 200 New Orleans Court Building, until June 9 at 8 o'clock P. M., and then be publicly opened, for furnishing and installing three horizontal return tubular boilers, with settings, breeching and appurtenances, to be installed in the Cotton Warehouses and Terminal, located on the east bank of the Mississippi River between Valence and Soniat streets.

Deposit required with proposal, \$500. Bond required with contract, \$3000.

On and after May 22 plans and specifications will be on file at the office of Ford, Bacon & Davis, 321 Canal street, New Orleans, La., where full sets will be furnished to prospective bidders on a deposit of \$25, which will be refunded to bidders submitting proposals. To bidders who do not submit proposals, \$15 will be refunded.

The right is reserved to reject any and all bids.

ERNEST M. LOEB,
President.

Cranes

New Orleans, La.

Sealed proposals will be received by the Board of Commissioners of the Port of New Orleans at their office, Suite 200 New Orleans Court Building, until June 9 at 8 o'clock P. M., and then be publicly opened, for the furnishing and erecting of fifteen (15) or more Electric Traveling Cranes, two (2) Transfer Cranes, and one Crane Transfer and Elevator, for the Cotton Warehouses and Terminal, located on the east bank of the Mississippi River between Valence and Soniat streets.

Deposit required with proposal, \$3000.

On and after May 22 plans and specifications will be on file at the office of Ford, Bacon & Davis, 321 Canal street, New Orleans, La., where full sets will be furnished to prospective bidders on a deposit of \$25, which will be refunded to bidders who submit proposals. \$15 will be refunded to bidders who do not submit proposals.

The right is reserved to reject any and all bids.

ERNEST M. LOEB,
President.

INDUSTRIAL NEWS OF INTEREST

Items of news about industrial, railroad or financial interests, building operations, construction work, municipal improvements, or the sale of machinery or the letting of contracts in the South or Southwest, are invited from our readers whether they are advertisers or subscribers or not. We invite information of this character from readers in the North and West about their Southern business operations, as well as from Southern readers. News of value will be published just as readily when from non-advertisers as from advertisers.

H. R. Noel, Civil Engineer.

H. R. Noel, 302 Park Bldg., Richmond, who was associated with the late C. P. E. Burgwyn, civil engineer, of that city, announces that he has purchased all the papers, maps, letters, etc., necessary to carry on and continue the civil-engineering business conducted by Mr. Burgwyn.

Paving Brick Contract.

Thirty thousand yards of wire-cut-lug blocks, made by the Southern Clay Manufacturing Co., Chattanooga, Tenn., at one of its plants at Robbins, Tenn., were contracted for by the Southern Paving Construction Co., Chattanooga, to be used for paving some of the heavy-traffic streets of Anderson, S. C. W. A. Saunders is the City Engineer and Gilbert C. White consulting engineer.

To Install Electrical Apparatus.

Contract to install the power-plant equipment for the Enterprise Lumber Co. at Mount Olive, N. C., has been awarded to the Comstock Electric Co. of High Point, N. C. The installation includes a 200 K. V. A. 600-volt three-phase 60-cycle generator, three 30 K. V. A. single-phase 2400/600-volt transformers, 300 horse-power in motors and one mile of transmission line to supply power to the town of Mount Olive.

Alex. Schwalbach Leaves Bearings Company of America.

On June 1 Alex. Schwalbach will sever his connections with The Bearings Company of America, Lancaster, Pa. For the past six years Mr. Schwalbach has been the advertising and publicity man for the F. & S. bearings imported by the former J. S. Bretz Company and its successor, The Bearings Company of America. Mr. Schwalbach is not alone an all-round newspaper man, but has had a long selling experience in the bicycle, motorcycle and automobile business.

Wants to Represent Southern Products in New England.

A list of houses situated in the South and Southwest who wish to furnish supplies or goods to New England manufacturers is sought by the Central New England Distributing Agency, Springfield, Mass. In addition to a large warehouse in which the company handles and cares for all kinds of goods for manufacturers, a sales department with permanent sales and showrooms and sales force is maintained in order to successfully cover the sales as well as the distribution ends of its customers.

Bank Fixture Contracts.

The American National Bank of Bowling Green, Ky., which recently purchased the Warren National Bank, has placed an order with the Southern Seating & Cabinet Co., Jackson, Tenn., for fixtures sufficiently commodious to satisfy the needs of the combined business of the two institutions. Other contracts recently secured by the company include: New banking equipment for the Citizens' National Bank, Hope, Ark., and new bank fixtures for the Cleburne County Bank of Heber Springs, Ark. In addition to bank fixtures, the Southern Seating & Cabinet Co. manufactures church furniture, courthouse, lodge and railway furniture, all kinds of public seating and store fittings.

The K-B Pulverizer

An all-steel hammer mill, known as the "K-B Pulverizer," has been designed for service and durability by the K-B Pulverizer Co., Inc., 56 Worth St., New York, to reduce material from a size of 3 inches and under to a fine product. It will handle limestone for cement-making and agricultural purposes, coal for coking, fluorspar, phosphate rock, gypsum, oyster shells, ores of various sorts, etc. The company claims the K-B Pulverizer combines the advantages of a steel frame, with a lining of heat-treated chrome steel plates or manganese hardened steel castings, adjustable manganese steel hammers and readily removable screens for producing a fine or coarse product. The machine, which is made in two sizes, is said to

be simple in construction, compact and of large capacity and low power.

Broderick & Bascom's Panama-Pacific Exhibit.

One of the novel exhibits in the Palace of Manufacturers at the Panama-Pacific Exposition, San Francisco, consists of a collection of rope products manufactured by the Broderick & Bascom Rope Co., 805-9 N. Main St., St. Louis. The exhibit occupies a space about 40 feet square, in the center of which is a large reel of "Yellow Strand" power-steel wire rope, 9 feet in diameter, resting on a 15-foot revolving platform, on which is placed reels and coils of wire and rope of the various types and qualities that are made by the company. Placed on top of the large reel and revolving with it, and at the same time turning in opposite directions by means of a planetary motion, are six smaller reels of wire rope representing the six strands of a rope which is about to be laid

will require millions of additional tires, and the Goodyear company's sales seem to be keeping up with the tire growth.

Reports Successful Sale.

Genuine liveliness and activity of the open market is emphasized by the results obtained in the liquidation sale at the plant of the Columbus Buggy Co., Columbus, O., recently held by J. E. Conant & Co., auctioneers, Lowell, Mass. For the week preceding the sale the property was thrown open for inspection, and the register of the sale shows that 139 visitors attended the exhibition, and during the sale, which lasted two days, there was a total attendance of 640 adults. It is said that in 95 minutes 53 electric and gasoline motor cars were sold, one at a time, bringing a total of \$42,100. The fact that the 1900 lots constituting the sale were sold in 660 minutes is a strong commentary upon the improved business conditions.

The Use of Spindle Grease Cups.

Since the first spindle cup made its appearance many styles and kinds of spindle grease cups have been used with more or less success. The original theory covering the spindle type of cup has, in many instances, been lost sight of, and the operation of the cup itself attributed to various make-shift theories which are said to be without a sound basis. In discussing the use of spindle grease cups, Adam Cook's Sons, manufacturers of lubricants, 708-10 Washington St., New York, claim that a spindle type of cup should only be used with a solid lubri-

the first if desired. It is operated by a one-quarter turn of one lever without ratchet or dog. "Chainless" dump wagons are made in either narrow or wide track of 2, 2½ and 3-yard capacities, or combinations of those capacities can be furnished on special order. Besides the Henderson "Chainless" dump wagons, the company manufactures farm and log wagons, trucks, carts and city drays.

To Increase Facilities.

Inquiry is made by the J. R. Hime Sand Co., P. O. Box 827, Atlanta, Ga., for prices and data on a complete sand-loading outfit, including overhead cable, excavator and steam or gasoline hoist, which it proposes to install within the next ninety days. The company in writing of the business situation as relating to its sphere of activity reports that promising signs of business revival is not far off. Recent contracts closed by the company include 100 to 125 carloads of sand for the Hillside Cotton Mills, Lagrange, Ga., T. C. Thompson & Bros., contractors, and 40 cars of concrete sand for the Pittman Construction Co., Atlanta, to be used on the Georgia School of Technology additions.

TRADE LITERATURE

Washing and Cooling Sprays.

Two booklets entitled "Washing and Cooling Air for Steam Turbine Generators" and "Sprays for Cooling Condensing Water" have been issued by the Spray Engineering Co., 93 Federal St., Boston, Mass. These booklets illustrate and describe the spray-cooling ponds, arrangements of sprays and different types of spray nozzles developed by the company.

National Service Heaters.

The National Pipe Bending Co., New Haven, Conn., is distributing, in blueprints of convenient size, a set of plans showing arrangements of hot-water heaters, storage tanks, etc. These prints present timely data relative to National service heaters for supplying hot water to boilers, dyehouses, laundries, factories, cotton and woolen mills, office buildings, hotels and industrial plants generally.

"Turbolite" Generating Equipment.

A pamphlet has recently been issued by the Henry E. Elrod Company, Houston, Tex., describing and illustrating its portable electric-lighting plant for lighting oil-drilling rigs, pumping plants, steamboats, cotton gins, ice factories and steam plants of all kinds. The steam-turbine-electric generator is said to be simple, reliable and compact, making a self-contained electric-lighting plant that requires no switchboard, meters or accessories.

"Turbo-Gear" Speed Transformer.

Catalogue "A," issued by the Turbo-Gear Co., Industrial Bldg., Baltimore, describes and illustrates its recently developed "Turbo-Gear" speed transformers. This mechanism is claimed to act as a speed-reducing or speed-increasing gear, and will run either right or left hand with the same efficiency. The driving and the driven shaft rotate in the same direction, producing an apparatus practically noiseless in operation. It is manufactured in seven different standard speed ratios.

Efficiency Spacing Bar.

A concrete reinforcement spacing bar which is said to combine in one piece a spacer, support, tie and crossbar, is manufactured by the Electric Welding Co., Pittsburgh, and described in a folder issued by the company. The efficiency spacing bar is a special channel shaped bar, provided with fingers to hold any size or shape reinforcing bar at the required spacing. At intervals of about 18 inches a chair is welded to the under side of the spacer bar supporting the

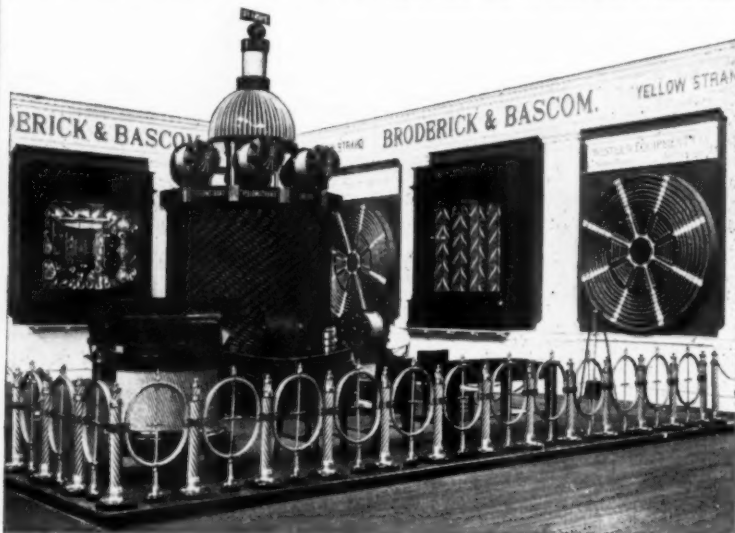


EXHIBIT OF "YELLOW STRAND" WIRE ROPE

up in finished form. The movements of the reels are arranged so as to illustrate the method of operation of a wire-rope machine in laying the strands into a finished rope. In fact, the scheme of the centerpiece is indicative of what is known as an upright or vertical closing and finishing wire-rope machine. A polished dome of finished wire rope set in radial form, supporting a small reel of wire rope, representing the company's wire-rope paper weight trade-mark, crowns the centerpiece. As shown in the illustration, an attractive fence made of wire rope surrounds the exhibit, and the mahogany cabinets displayed on the walls contain different tools used by loggers with wire rope and "Yellow Strand" power-steel wire rope products. On the walls are also placed two revolving discs holding samples of all the different constructions and qualities of wire rope made by the company. The finishing of the entire exhibit is said to be magnificent, the pilasters, bases, cornices, etc., being white enamel, and cabinets and all cases and other woodwork finished in mahogany, with all wire ropes not shown as "Yellow Strand" finished in gold.

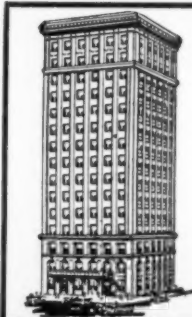
Growth of the Goodyear Company.

In 1909 the Goodyear Tire & Rubber Co. of Akron, O., made 102,669 automobile tires. In 1914 the number had grown to 1,478,396. During April Goodyear delivered nearly 40 per cent. more times to automobile manufacturers than during any previous month in the history of the company, this being all on 1915 business. About three years ago some bankers were wondering where the people of this country would get the money to pay for the 150,000 cars then manufactured. There are said to be at present about 1,500,000 automobiles in use, and next year the number will probably pass the 2,000,000 mark. This great expansion of the automobile business

cant possessing a low melting point. By that is meant a lubricant that will flow at a temperature ranging from 50 to 175 degrees Fahr. Genuine "Albany" grease, a pure tallo compound, possessing a low melting point, which can not only be used in spindle cups with success, but also in any other make or kind of grease cup, is recommended by the company for this purpose.

Henderson "Chainless" Dump Wagons.

A patented chainless dump wagon has recently been developed by the Henderson Wagon Works, Inc., Henderson, Ky. With this type of wagon it is said a load can be dumped and cleared instantly, and the wagon turned at right angles either to the right or left without interfering with its operation. The "Chainless" wagon is claimed to clear the load entirely after dumping without any strain whatever on team or damage to the drop doors by either the dump or wheels. This type of wagon enables a second load to be dumped on top of



HOTEL WINECOFF

ATLANTA'S

Newest and Most Complete Hotel

Absolutely Fireproof

EUROPEAN PLAN

200 ROOMS—Each with Individual Bath

RATES—\$1.50 and \$2.00 Per Day

WINECOFF OPERATING CO., Inc.

ROBT. R. MEYER, President

P. C. STEELE, Manager

ATLANTA, GA.

reinforcement the required distance from the forms. It is said that by one blow of a hammer a finger is bent over the reinforcing bar, holding it firmly in place. Efficiency spacing bars are made in standard lengths of 10 feet, but other lengths are furnished by special arrangement.

Pocahontas Smokeless Coal.

An interesting story of the development of the Pocahontas coal fields of West Virginia is given in a catalogue gotten up by the Pocahontas Operators' Association, Roanoke, Va., for distribution at the San Francisco Exposition. Description of the quality of the coal mines, characteristics, its value as a steam coal, etc., together with illustrations showing interior views of mines, coal-handling machinery and methods of operation as relating to mining, shipping, etc., is contained in the catalogue. Pocahontas coke, also described in the catalogue, is

made from Pocahontas coal, and is said to possess the following advantages: Lowest in ash, sulphur and phosphorus and highest in fixed carbon, producing an unsurpassed fuel for blast furnace, Bessemer manufacture and foundry use. A list of selling agencies given in the catalogue from which genuine Pocahontas coal may be purchased includes: Pocahontas Fuel Co., Wm. C. Atwater & Co., and American Coal Co. of New York; The Crozer-Pocahontas Co. and Castner, Curran & Bullitt, Inc., of Philadelphia; Flat Top Fuel Co. and Bluefield Coal & Coke Co. of Bluefield, W. Va.; Houston Coal Co., Smokeless Fuel Co. and Pocahontas Coal Sales Co. of Cincinnati; West Virginia Pocahontas Coal Sales Co., Norfolk, Va.; Eastern Pocahontas Coal Co., Vivian, W. Va.; S. J. Patterson Co., Dayton, O.; Norfolk & Chesapeake Coal Co. and Solvay Collieries Co. of Detroit, Mich., and Lake Superior Coal Co., Montgomery, W. Va.

"Bonanza" Cement Tile Roofing.

Reinforced weatherproof and fireproof tile for pitched and flat roofs as applied to industrial buildings is described and illustrated in a booklet issued by the American Cement Tile Manufacturing Co., general offices, Oliver Bldg., Pittsburgh, and Southern office and works at St. Louis, Mo., and Fairfield, Ala., respectively. The booklet shows types of construction for various lines and purposes, as found among the many thousands of installations, and suggests to the user its many possibilities. Some of the company's recent Southern installations illustrated in the booklet include "Bonanza" cement tile roofing for the high-tension electric-power buildings of the Georgia Power Co. at Tallulah Falls, Ga.; 150,000 square feet of "Bonanza" roofing for the coke by-products plant of the Tennessee Coal, Iron & Railroad Co., Ensley, Ala.; loading platform of the Anheuser-Busch

Brewing Co., St. Louis, Mo., and 15,000 square feet of cement tile roofing for the factory buildings of the Pennick & Ford Can Co., New Orleans, La. One of the larger contracts, comprising over 1,000,000 square feet of "Bonanza" cement tile roofing, finished by the company included the supplying of this product for approximately 30 buildings of the Balboa Terminals at the Pacific end of the Panama Canal. In order to handle this immense contract the American Cement Tile Manufacturing Co. established a plant for the manufacture of its products at Paraizo, Canal Zone, about six miles from Balboa. "Bonanza" skylight tile, gutters, wall plates, ventilator collar tile and specials are also manufactured by the company. A special booklet on "Bonanza" data sheets contains valuable general data and suggestions on cement roofing tile, illustrated with drawings and diagrams of many types of roof construction.

Special Advertisements of General Interest.

Sale Of ENOREE COTTON MILLS

Under and by virtue of order of Court of Common Pleas, dated May 3, 1915, in the case of W. S. Montgomery et al, Plaintiffs, vs. Enoree Manufacturing Company, Defendant, I will sell to the highest bidder at public outcry on June 7, 1915, at 12 o'clock noon, at the County Courthouse, Spartanburg, S. C., all of the property, both real and personal, of the Enoree Manufacturing Company, including 720 acres, more or less, in Spartanburg and Laurens counties, and the Cotton Mill thereon, containing 36,000 spindles, with full equipment of machinery and mill village dwellings and tenement-houses, two standard cotton warehouses, brick store, and stock of merchandise, hotel and livery stable. Also, all supplies, live stock, etc., together with the water-power by which the mill is operated in addition to the steam-power plant auxiliary thereto. Also, an undeveloped water-power of 371 acres, more or less, on Tiger River, in Spartanburg county, with certain rights of overflow, including Hills Shoals.

The above property to be sold as a whole for cash. No bid for less than \$50,000 will be considered, and a deposit of \$5000 in cash or a check properly certified by a satisfactory bank in the State of South Carolina will be required before any bid can be submitted.

For further particulars as to the property and terms of sale, reference is craved to the decree on file in said Court.

A. M. LAW,

Receiver Enoree Manufacturing Co.

Spartanburg, S. C.

Public Sale of Valuable Mill Site, Machinery, Etc. of Tolson Lumber & Mfg. Co. Time of Sale—Monday, June 7th, 1915, at 12 M.

Place of Sale—Office of Tolson Lumber & Manufacturing Co.
Terms of Sale—CASH.

Mill Site.—This is one of the most valuable Mill or Factory Sites in New Bern, with a frontage of over 150 feet on Neuse River and East Front street, running from East Front street to channel of Neuse River, and adjoining A. C. L. right of way, offering splendid facilities for water and rail shipments.

Buildings.—These include Wharf Building, Factory Building and Office Building and Sheds, which were constructed at cost of over \$5000, and are in good condition.

Machinery, Belting, Shafting, etc.—The Machinery is modern and in good condition, which, including the Belting, Shafting and other equipment connected with the mill, cost over \$7000.

Great Opportunity Offered.—This sale affords prospective purchasers a great opportunity to buy a valuable Mill Site and Plant, now ready for operation. Such a plant is greatly needed in this section, and if run upon business principles would be a most profitable enterprise.

Sealed Bids Received.—Up to and at the sale the undersigned Trustee will receive sealed bids for this property, and said bids will be opened at time of sale and used as bids at the public sale.

Sale Subject to Approval of Bankrupt Court.—This property will be sold subject to approval of Bankrupt Court, and title will not pass until same is approved and confirmed by said court.

Don't forget time and place of sale.

For further information apply to undersigned Trustee.

THOS. D. WARREN,

This 5th May, 1915.

Trustee Tolson Lumber & Mfg. Co., New Bern, N. C.

TANKS—PIPE

14 10,000-gallon heart cypress tanks, good as new, \$75 each, knocked down, f. o. b. Memphis.

16 6000-gallon heart cypress tanks, good as new, \$50 each, knocked down, f. o. b. Memphis.

10,000 feet 2" tested ammonia pipe, complete, with ammonia unions, 7½c. ft., f. o. b. Memphis.

F. G. PROUTT, Trustee

374 Randolph Bldg. Memphis, Tenn.

FOR SALE

Delaware River property; 10 acres of land; buildings erected recently; equipment; plenty of labor; deep water; three railroads; excellent opportunity to purchase a property that can be operated immediately.

W. L. BIRTWELL

Crozer Building

PHILADELPHIA

If you wish to keep posted on the progress of the South read the

MANUFACTURERS RECORD

Price \$4.00 a year, or six months for \$2.00

ICE PLANT

FOR SALE

For Sale—A 55-ton Ice Plant in one of the larger towns in Texas, running, selling all ice in summer; good business; will give possession any time. Lot 250 ft.; 100 trackage; 3 deep wells; one 35-ton upright "Frick"; one 20-ton "Wolf"; 3 boilers; all pumps in duplicate; three 4-room houses close.

Address D. B.

Care Manufacturers Record, Baltimore Md.

SALES AGENCY

In New England territory would like to represent reliable concern in iron or machinery line, straight commission basis. Prompt attention to all inquiries. Have storage facilities—salesmen on road—equipped with business autos. Write for information. Address

VULCAN CO. Allston Sta., Boston

Merchants Looking for Better Location

with all conditions in their favor, should write me about new EARLE BUILDING, Birmingham, Ala.—five stories and basement, strictly modern, full fireproof construction, in heart of city, and one hundred feet from best improved corner in the South.

R. A. TERRELL

503 Title Guarantee Bldg. Birmingham, Ala.

Your chance to open up a new market for your goods in SOUTH AMERICA

If interested, write at once to

FRIEDR. W. LUTZ

RICHMOND, VA.

Personal Representatives in Brazil and the Argentine Republic.

Proposals advertised in the Manufacturers Record bring good results.

Public Sale of EWALD IRON COMPANY

The Fidelity and Columbia Trust Company, Executor and Trustee under the will of L. P. Ewald, will, on Wednesday, June 2, 1915, at eleven o'clock A. M., at the Exchange Hall of the Board of Trade in Louisville, Kentucky, sell at public auction to the highest bidder 2555 shares of the capital stock of the Ewald Iron Company of Louisville, Kentucky, a corporation organized under the laws of Kentucky.

The total capitalization of the Company consists of 3000 shares of common stock, of which there has been issued 2555 shares, each share being of the par value of \$100. Forty-five shares remain in the treasury of the Company to be issued in accordance with the terms of a contract between the Ewald Iron Company and A. J. Sills.

The sale has been authorized by the Jefferson Circuit Court, Chancery Branch, Second Division.

No bid of less than \$214.17 per share will be entertained, and the Executor and Trustee reserves the right to withhold from sale 770 shares if, after the final acceptance of a bid, it elects so to do. Each bidder will be required to deposit with the Executor and Trustee, in advance of the bidding, a check for \$60,000, certified by some bank or trust company doing business in Louisville, Kentucky, as an evidence of good faith, and in order to assure compliance by the successful bidder with the terms of sale. Checks deposited by unsuccessful bidders will be returned to them, and the check deposited by the successful bidder will be credited on the purchase price when the terms of sale are fully complied with. In case the successful bidder fails or refuses within ten days to comply with the terms of sale, said check so deposited by him will be forfeited to the Executor and Trustee for the use and benefit of the estate of L. P. Ewald as liquidated damages and not as penalty.

The terms of sale will be one-third cash and the balance in three equal installments due on or before six, twelve and eighteen months, respectively. For the deferred payments the purchaser will execute to the Executor and Trustee his three promissory notes, of equal amount, due on or before six, twelve and eighteen months from their date, respectively, and bearing six per cent. interest from their date. To secure the payment of said notes, and each of them, a lien will be retained on all the shares of stock sold, and said shares must be deposited with the Executor and Trustee, to be held by it until said indebtedness is fully paid. The notes executed by the purchaser shall be the usual form of collateral note now used by the Fidelity & Columbia Trust Company, and each note shall contain a provision that on failure to pay any note or interest for thirty days after same becomes due, the Trustee may declare all of the unpaid notes to be due and may proceed to enforce payment thereof by a sale of the stock as provided in the notes.

There will be refunded to the Ewald Iron Company, upon compliance with the terms of sale, the sum of \$30 on each share of stock sold, being the amount of a dividend declared by the Ewald Iron Company on the 16th day of January, 1915. The purchaser shall have the right to pay the full purchase price in cash.

Prospective purchasers shall have the right to inspect a statement showing the operations of the Ewald Iron Company for the period of five years last past, said statement having been prepared by James S. Escott in February, 1915, and filed in the Jefferson Circuit Court, Chancery Branch, Second Division, in action No. 56908, styled Columbia Trust Company, Executor, etc., vs. Philip L. Ewald, etc., and certified by the Executor and Trustee to be correct. Prospective purchasers shall also have the right to inspect the plant of the Ewald Iron Company on any day from May 22, 1915, to June 1, 1915.

Bargains in Machinery and Supplies.

STEAM HAMMERS

Single Frame Steam Forging Hammers of all sizes in stock for immediate shipment. Get our prices before buying. They will interest you.

Erie Foundry Company ERIE, PA.

Foundry Equipment FOR SALE

Including Iron and Wood Flasks
Four Rumbling Mills
One No. 5½ Roots Blower with about 100 ft Galvanized Pipe, Crane, etc.

All in Good Condition.

D. A. TOMPKINS COMPANY Charlotte, N. C.

400 KW. Direct Current Unit Generator FOR SALE

400 KW., type E, Fort Wayne, 125 R.P.M., 10 pole, compound wound, 250 or 550 volts, direct connected to

ENGINE

Russell tandem compound, 20" and 35"x27"; also switchboard panel for this unit, including necessary switches, Circuit Breakers, Equalizing Switch and Field Rheostat. This unit is practically new, having been operated only a few weeks. Price \$3500 f. o. b. Sandusky, Ohio.

GENERAL UTILITIES & OPERATING CO.
Munsey Building, BALTIMORE, MD.

Electrical Equipment FOR SALE

All the electrical equipment in the
Belt Line Power House
OF THE
B. & O. R. R.
Howard and Montgomery Sts.
BALTIMORE, MD.

Consisting of Engines, Generators, Motors, etc. Inquire on the premises, or of

LURIA BROS. & CO.
READING, PA.

Gas Engine, Grain Pressers, Dryer, Bagging Machine, Safe, Scale, Motors, Wagons, etc.

FOR SALE

A large gas engine, 14-in. belt; 3 large grain pressers, with conveyors, complete; a large grain dryer, for brewer's grain or fruit; bagging machine; large safe; 5-ton wagon scale; 5 different-sized motors; 10 steel-body back-dump grain wagons, suitable for coal, brick or scavenger.

415 W. Fayette Street
BALTIMORE, MD.

Rebuilt Leather Belting

Half price new equal quality, less stretch, equal service. Less price cheap new, better service. All sizes, guaranteed. New leather, rubber, canvas, factory prices. We buy good leather belting. Salesmen and selling agents wanted.

FREDRICH BELTING CO., Manufacturer, St. Louis, Mo.
Please mention Manufacturers Record.

Woodworking Machinery

We have an especially good selection of woodworking machinery in stock at the present time—much of the machinery listed below having been used—but practically as good as new. We offer it at attractive prices. Write for complete machinery list.

PLANERS (Double Surface)

- 1 30"x14" "Power."
- 1 30"x6" "Woods."

PLANERS (Single Surface)

- 1 30"x7" "Clement-American."
- 1 30"x6" "Crescent."
- 1 26"x8" "Crescent."
- 1 26"x8" "Sidney."
- 1 24"x8" "Smith."
- 1 24"x7" "American."
- 1 24"x6" "Friction "Crescent."
- 1 24"x4" "Gleason."
- 1 18"x6" "Friction "Crescent."
- 1 18"x6" "Crescent."
- 1 16"x6" "Frank Machine Co."

SANDERS

- 1 42" Triple drum "Fay & Egan."
- 1 36" Triple drum "Berlin-Invincible."
- 1 30" Triple drum "Smith."
- 1 30" Single drum "Berlin."
- 1 No. 2 "Clement" universal.
- 1 18" Single drum "Clement American."
- 1 12" Sanding drum.
- 1 No. 2 Belt rubbing and sanding "Moore."
- 2 18" Disc "Crescent."

L. F. SEYFERT'S SONS, Inc.

437 N. Third St. Philadelphia

FOR SALE

Angle Roll from 2" to 6".
Multiple Punch 48".
Double-end Punch ½" capacity.
Rail Bender.

The Huntington Machine & Foundry Co.
HUNTINGTON, IND.

ELEVATING GRADER FOR SALE

Made by the Good Roads Machinery Co. Used a short time only. New elevator belt to go with machine. Original cost \$820. Will sell for \$250 f. o. b. North Wilkesboro.

H. C. LANDON, North Wilkesboro, N. C.

MACHINERY BARGAINS

1 No. 40 Double Shaving Exhauster, complete with all pipes.
1 24x4 Four-Sided Planer and Matcher.
1 42" Band Resaw.
1 30x7 Whitney Double Surfer.
2 16" Jointers.
1 30x7 Whitney Single Panel Planer.
1 8" Jointer.
1 Berlin 48" Triple Drum Sander.
50 24" 80-lb. I Beams, lengths to 39".
35 20" 65-lb. I Beams, 19" to 20".
65 15" 60-lb. I Beams, 18" to 20".
165 15" 60-lb. I Beams, 18" to 22".
200 10½" 35-lb. I Beams, 14" to 22".
150 tons 12" 35-lb. Sheet Piling.
Write for Free Complete List No. XB-213.
Harris Brothers Company, Owners
CHICAGO HOUSE WRECKING CO.
35th and Iron Sts. CHICAGO, ILL.

CORLISS ENGINES

10x30 Allis. 2-14x36 St. Louis & Murray.
12x30 Corliss—13x30 Quincy.
16x36 St. Louis—16x36 Murray.
2 22x42 Hamilton. 2-28x48 Cooper.
30x60 H. & B. 32x54 Bass.
32 & 62x60 Allis Hor. Cross. C. H. D.
26 & 54x60 Allis Hor. Tand. C. H. D.
WILSON MACHINERY CO.
419 Pine St.—OTHER SIZES—St. Louis.

500 volt D. C. Motors with Base and Pulleys For Sale

One G. E. 30 H. P. 1025 R. P. M. . . \$175
One Bullock 25 H. P. 1375 R. P. M. . \$125
Lanham Hardwood Flooring Co.
LOUISVILLE, KY.

250-volt Generators For Sale

4 200 K. W. 6-pole 800-amp. 250-volt 500 R. P. M. Northern Electric Company Belt-Driven Direct Current Generators, fully equipped with sliding rails, pulleys, switchboard panels, instruments and cables.
1 100 K. W. Westinghouse.
1 50 K. W. Fort Wayne.
Now located Olds Motor Works plant, Lansing, Michigan.
Immediate delivery. Special low price.
Address all communications to
NATIONAL MACHINERY & WRECKING CO.
1916 Scranton Road
Electrical Dept. CLEVELAND, OHIO

If you wish to keep posted on the progress of the South read the
MANUFACTURERS RECORD
Price \$4.00 a year, or six months for \$2.00

FOR SALE CHEAP

One Land Pile Driver, 3000-lb. hammer, 50 ways and steel rollers.
Four Steel-Guyed Stacks, 6"x100".
One Steel Self-Supporting Stack, 10"x150".

CENTRAL TRANSFER CO.

415 N. Front St BALTIMORE, MD

Modern First-Class Machinery a Specialty

Every piece rebuilt and guaranteed; prompt deliveries.

CORLISS ENGINES

16"x32"x36" Hamilton Cross Compound, 500 H. P., extra heavy.
18"x48" Greene.
16"x36" Allis, 150 H. P.
16"x30" Watts-Campbell L. H., 150 H. P.
16"x30" Wetherill R. H., 150 H. P.
12"x36" Greene R. H., 110 H. P.
12"x30" Greene R. H., 100 H. P.
Automatic and Slide-Valve Engines, Vertical and Horizontal, all sizes.

DUPLEX STEAM PUMPS

Steam 20", water 12", stroke 12", "Snow," outside packed.
Steam 16", water 9", stroke 24", "Barr," outside end packed.
Steam 12", water 8", stroke 10", "Advance."
And many others.

HEATERS

3000 H. P. Goubert, heavy pressure.
1500 H. P. Webster.
1000 H. P. Berryman Gleaner.
500 H. P., 300 H. P., 200 H. P., 100 H. P. Cochrane and many others.

AIR COMPRESSORS

All sizes—Steam and Belt Driven.

ICE MACHINE

15-ton Ice; 30-ton Refrigerating; Penna. Iron Works; Corliss driven.
Large assortment of Machine Tools. If you are in want of tools of any kind, let me know, and I would be pleased to mail you detailed specifications and best price.
Send for complete catalogue. Correspondence solicited.

HERMAN L. WINTERER
908-910 Beach St. Philadelphia, Pa.

AT A BARGAIN

10,000 feet 22" Riveted Steel Dredge Pipe (first-class condition, practically good as new) at 50c. per foot f. o. b. cars, for immediate shipment.
2 1,000,000-gallon D'Auria Pumps (can now be seen working).
1 Ingersoll-Sargeant Straight Line Air Compressor, 22x22½x24.
1 Ingersoll-Sargeant Straight Line Air Compressor, 16x16½x18.
2 Ingersoll-Sargeant Straight Line Air Compressors, 12x16½x14.

PLANTS BOUGHT AND DISMANTLED.
Boston Iron & Metal Company
Baltimore, Md.

GENERATING SET

150 K. W. G. E. Type MP Class 6 250-volt Generator, direct connected to Fleming Harrisburg tandem compound engine, with switchboard, in use about two years. Bargain for quick sale.

L. A. GREEN

1511 First Nat. Bank Bldg. PITTSBURGH, PA.

GENERATING SET FOR SALE

A 6½ K. W. Allis-Chalmers Generator, 240 volts, 250 amperes, direct connected with an Erie City slide-valve 100 H. P. engine, in first-class order and condition. For further information address

THE ROYAL LAUNDRY, Richmond Va.

TOOLS For Sale

We are reducing our department for cutting automobile gears and for other automobile work. The following tools, all in excellent condition, are offered for sale:

- 4—No. 12 Brown & Sharpe Plain Millers.
- 1—No. 3 Brown & Sharpe Automatic Gear Cutter.
- 3—No. 13 Brown & Sharpe Automatic Gear Cutters.
- 3—No. 4 Brown & Sharpe Automatic Gear Cutters.
- 2—6" Bilgram Bevel Gear Planers.
- 4—16" Bilgram Bevel Gear Planers.
- 5—36" Fellows Gear Shapers.
- 5—24" Fellows Gear Shapers.
- 2—No. 1 Whiton Gear Shapers.
- 3—16 & 20x44 Planers.
- 1—American Sensitive Radial Drill.
- 2—Moline Drills, No. 7-D.
- 3—Drill Presses, 20" to 30".
- 1—3-Spindle Barnes Drill.
- 1—4-Spindle Barnes Drill.
- 1—3-Spindle Allen Sensitive Drill.
- 1—6-Spindle Allen Sensitive Drill.
- 3—2-Spindle Newton Horizontal Automobile Cylinder Boring Mills.
- 2—1-Spindle Newton Horizontal Automobile Cylinder Boring Mills.
- 3—No. 70 Heald Internal Grinders.

Any of the above for sale for cash or in exchange for Heavy Engine Lathes, 16" or larger.

Providence Engineering Works
PROVIDENCE, R. I.

REFRIGERATING MACHINE

3-Ton Racine Vertical, two cylinder, belt type Refrigerating Machine, complete with condenser, ammonia receiver, oil trap, gauges, cooling-room coils and hold-over tank; little used. Bargain for quick sale; less than one-half new cost.

The Assets Purchasing Company
Wheeling, W. Va.

FOR SALE

Complete Steam Electric Power Plant

Big Bargain Before Removing
to Our Warehouse

- 18x18 Skinner Center Crank Self-Oiling Automatic Engines.
- Jeffrey 150 K. W. 250-275-volt Direct Current Belt-Driven Generators. Speed 500 R. P. M.
- 15-Panel Switchboard and Instruments.
- 15" Double Leather Belts.
- 150 H. P. each 72"x18" BUTT-STRAPPED TRIPLE-RIVETED Horizontal Tubular Boilers with Full Flush Fronts, Grate Bars and Fittings.
- 100 H. P. Stillwell Open Type Feed Water Heater.
- Suitable Size Single Steam Pumps.

This plant is complete in detail, including all necessary fittings and attachments, and is in excellent condition throughout. Will sell separately at very low prices, but offer an exceptional bargain on the plant complete.

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Suite 1733 First National Bank Building
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Cross Compound Corliss Engines FOR SALE

- 2-20x38x48 500 H. P. 80 R. P. M. Hamilton.
 - 1-14x26x42 350 H. P. 85 R. P. M. Hamilton.
- Above have rope drive wheels. Are in first-class condition.
- Price \$25 per net ton.

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1916 Scranton Road
Electrical Dept. CLEVELAND, OHIO

MACHINERY and SUPPLIES

FOR SALE

All sizes new and second-hand Pulleys, Belting, Shafting, Hangers, Couplings, Pillow Blocks, Collars, etc.

PASSMAN BROTHERS

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BOILERS FOR SALE

- 1-300 H. P. Vogt Water Tube Boiler, 150 pounds, with Green Stoker and 60"x100" steel stack, used only 18 months.
- 1-100 H. P. Vogt Hand-fired Water Tube Boiler, 150 pounds, used one year.

HENRY VOGT MACHINE CO.
LOUISVILLE, KY.

Special Bargains in Sanders

- 1 1/2" 3-drum Perfection Sander, thoroughly overhauled.....\$250.00
- 1 1/2" 3-drum Thomas Sander.....\$400.00
- 1 1/2" 4-drum H. B. Smith Sander.....\$500.00
- 1 1/2" 3-drum Royal Invincible Sander, used only 3 weeks.....\$550.00
- 1 1/2" 3-drum J. A. Fay & Co., fine order.....\$500.00
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- 1 1/2" Carrey Hand Jointer.....\$100.00
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- Woodworking machinery of all kinds. Write, stating your requirements.

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- No. F-15"x16' Blaisdell 4-step Cone.

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- No. 76-No. 3 Lodge & Shipley Rapid Reduction.
- No. 5302-20"x16' Lodge & Shipley High Speed.
- No. 1305-14"x16' Towley 4-step Cone Speed.

TURRET LATHES

- No. 28-16"x6' Lodge & Shipley 3-step Cone.
- No. 111-22"x7' Lodge & Shipley 3-step Cone, Friction Head.
- No. 122-Two 24"x10' Lodge & Shipley 3-step Cone, Friction Head.
- No. 106-18"x6' Lodge & Shipley Turret.

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- No. B-36"x36"x12' Niles.
- No. 248-30"x30"x10' Gray.
- No. 219-24"x24"x12' Ohio.
- No. 239-16" Queen City Back Geared.
- No. D 223-26" Smith & Mills Shifting Belt.

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- No. 629-No. 16 Landis Plain Grinder.
- No. 650-No. 11 Landis Plain Grinder.
- No. 668-No. 3 Landis Plain Grinder.
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- No. 703-No. 1 LeBlond Universal Cutter and Tool Grinder.

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- No. 482-3-spindle Henry & Wright Sensitive Drill.
- No. 522-Fay 28" Wood Planer.
- No. 690-Marion Buffing Stand for two wheels.
- No. 1697-Bowscher 12"x38" Balancing Ways.
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- No. 1336-Sturtevant Blower. Diameter of outlet, 24".
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- No. 1340-1" Cleveland Automatic Turret Machine.
- No. 1329-2 1/2" Hartford Automatic Screw Machine.
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- No. D-West Haven Hack Saw (for 6" stock).
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- No. 1363-12"x40" Mumford Molding Machine.
- No. 1379-Universal Swivel Table for Radial Drill.
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- Geared head 20"x10', 18"x10', 16"x10', 14"x10', 12"x10'. Cone head 20"x10', 18"x10', 16"x10', 14"x10', 12"x10'.
- All the above with semi-quick-change gears.
- Second-hand lathes with geared heads, quick-change gears, 16"x10', 14"x10', 12"x10'. Second-hand lathes, cone head, plain gears, 20"x18', 22"x18', 24"x18', 18"x18', 16"x18', 14"x18'.

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- 2 400 Westge. 250 18 & 36x30 4-Value Tand. Comp.
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- 16x36 Allis.....\$550.00
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These presses were formerly used in fertilizer work. We have sold quite a few of them to be used in other classes of work requiring hydraulic presses. We are selling them cheap in order to move them quickly. If interested, write us for cuts and full description.

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- 1 1/4" Cleveland Standard Automatic Machine.
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- No. 2 Brown & Sharpe Screw Machine.
- 3500-lb. Bement-Miles Double-Frame Steam Hammer.
- 350-lb. Bement-Miles Single-Frame Steam Hammer.
- 36"x12" Hess Heavy-Duty Slab Milling Machine.
- 12" Niles Slotter.
- 26"x12" Fifield Lathe, triple geared.
- 6" Cox Pipe Machine.
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- 6 150 H. P. 72"x18" Horizontal Tubular, 125 lbs. steam working pressure.

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- 24"x42" Allis, left hand.
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- 1 40 H. P. Westinghouse Engine, 25 K. W., 110-volt dynamo.
- 2 New 54" Vertical Boring Mills.
- 3 1" Bolt Cutters.

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Vertical "Nash" 82 H. P. 3-cyl. Producer Gas Engine, 100 H. P. Traverse City Producer, Scrubber, Air Pump, Air Tanks, very complete outfit in fine shape, running every day. Could in trade use delivery car, roadster or passenger automobile. No junk wanted. What have you?

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All Weights With Angle Bars

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36" gauge 1-7x10 Byers geared; 2-9x14 Porters; 2-10x16 Vulcans; Std. gauge 6-wheel switcher, 50 tons, separate tender; 4 10x16 Porters; 2 1/2' and 48" gauge Climax, Shays and Davenport.

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2 No. 0 Thews 1/2-yard traction; 2 No. 14B Bucyrus 1/2-yard traction; 3 Model 60 Marion 2 1/2-yard; Marion Models 20, 23 and 31; Bucyrus Models 65, 70C.

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2, 4, 6, 8, 12-yard 2-way dump; 5-60M Center dumps.

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2-drum 2-6 1/2x8 Americans with boilers; 7x10 Mundy and Flory with and without boilers; some have Dake swingers.
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20, 25, 30, 35, 40, 45, 50, 55, 60, 65, 70, 80, 85, 90 and 100 lb., all with Fish Plates

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Splice Bars for any section rail in stock.

Frogs, Switches, Bolts, Nuts, Spikes, and all Track Accessories.

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Four wheel type

40 tons; 17"x24"; 160 lbs. pressure

Overhauled
Modern

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ARCADE BUILDING
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500 Tons 80-lb. Rails.

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Several Locomotives and Cars,

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All Sizes.

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40-60,000 Cap.

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First-Class Condition.

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About 43 Tons, 58 lbs. per yard,

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About 600 Tons, 60 lbs. per yard,

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All Weights.

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10"x12" D. C. D. D. "Lidgerwood" Hoisting Engine and Boiler. Many other smaller ones.
2 1/2-yd. "Chain Belt" Mixers on trucks, with Boiler and Engine. They have side loaders.
Many other makes and sizes.
3 "Ingersoll-Rand" Sheet Piling Hammers.
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Orange Peel and Clam Shell Buckets.
Boilers and Engines. Every size and for every duty.

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Also, 3000 tons of Relaying Rails, all weights. Write us for prices and terms.
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1 Marion Revolving Steam Shovel, Model 31, 7/8-yard dipper, mounted on traction wheels. Shop No. 2851. Practically as good as new. Price \$3250.
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36 Western Dump Cars, 2 yards. Price \$25 to \$50 each.
6 Dump Cars, good as new. Price \$25 each.
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70 Tons 20-lb. Steel Rails. Price \$30 per ton.
All located on Norfolk Southern Railroad near Norwood, N. C.
Terms on steam shovels and cars.

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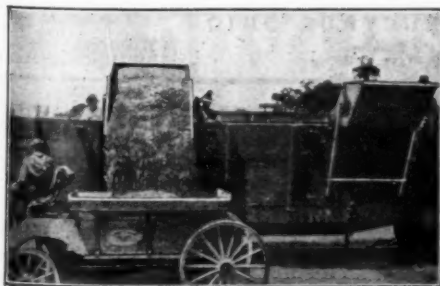
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All Steel and
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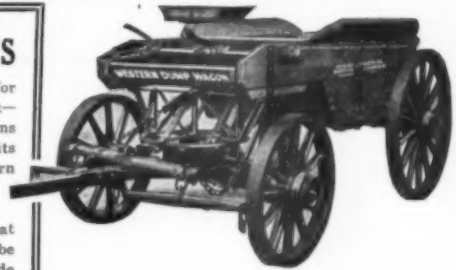
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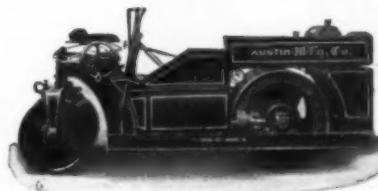


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Simplicity, strength, efficiency and durability are the leading qualities that were kept in mind in designing and manufacturing the AURORA CRUSHER. The frame is short and the machine compact and is, therefore, easily moved from place to place. Aurora Crushers are built in two sizes. They can be furnished either mounted on trucks or on skids, with or without full equipment of elevators, screens and bins.



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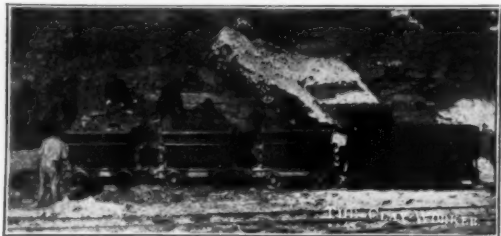
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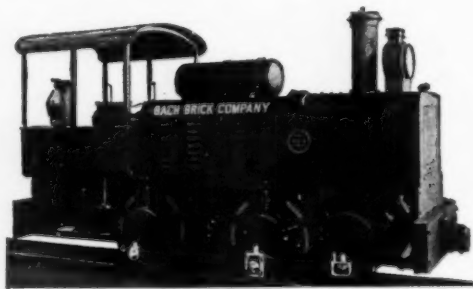
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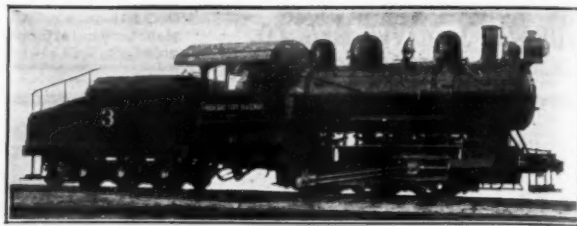
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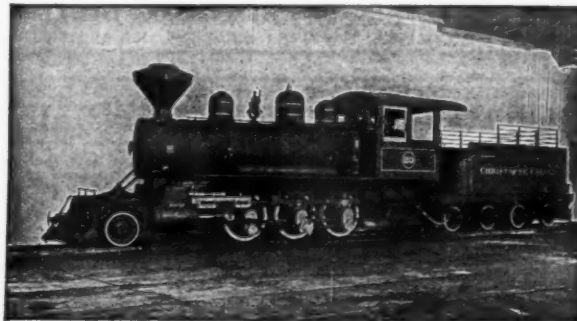
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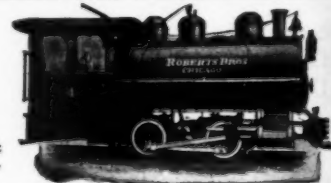


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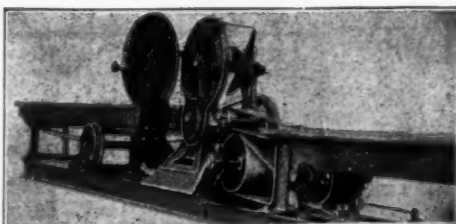
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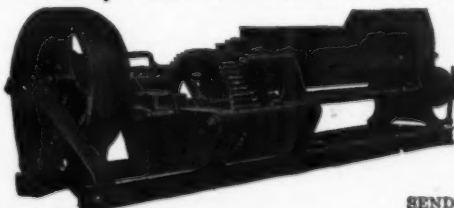
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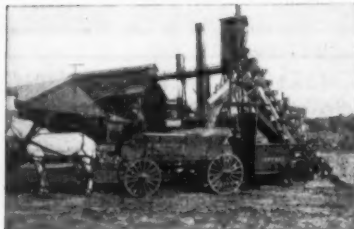
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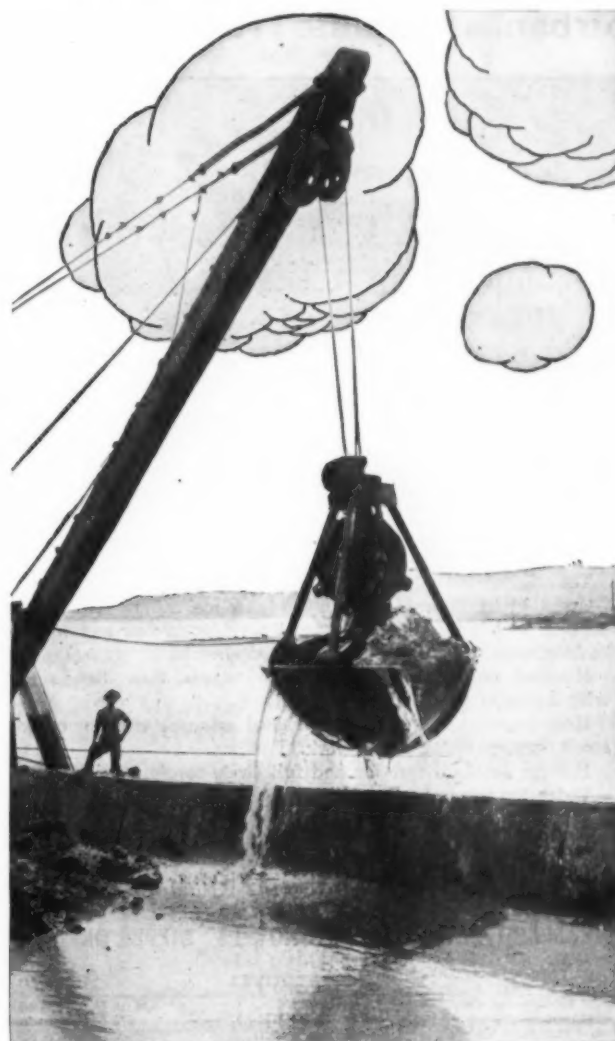
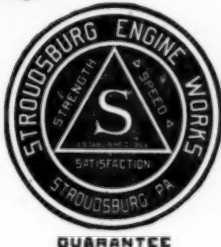
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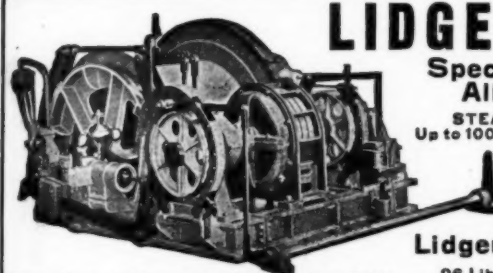
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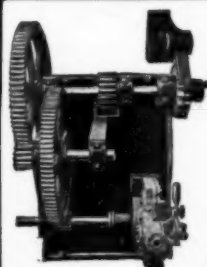
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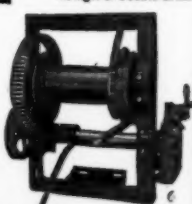


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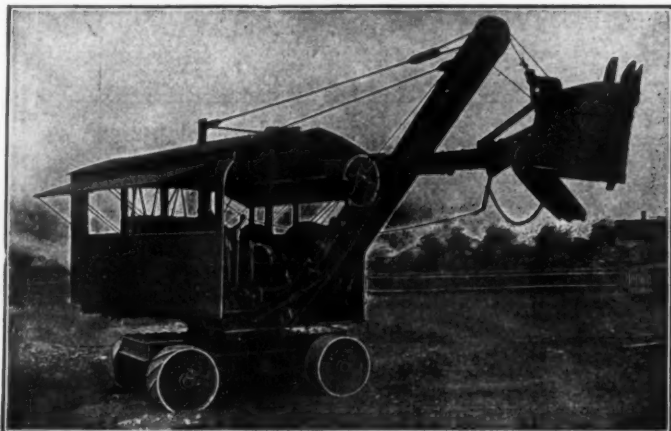
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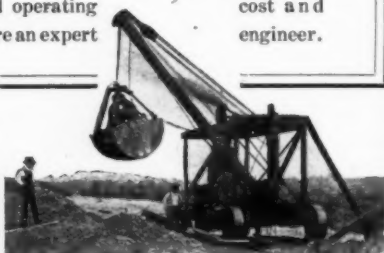
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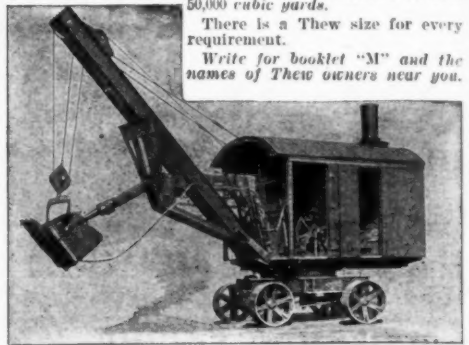
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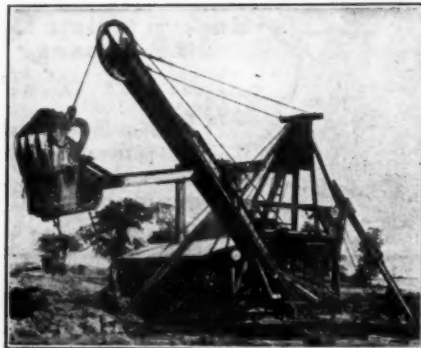
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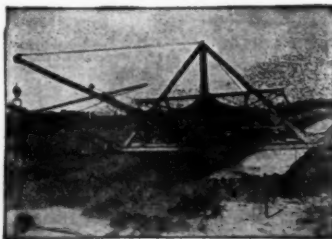
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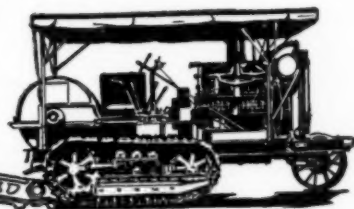
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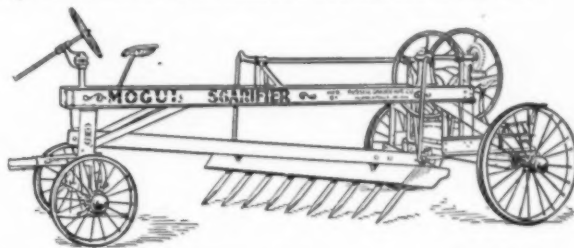
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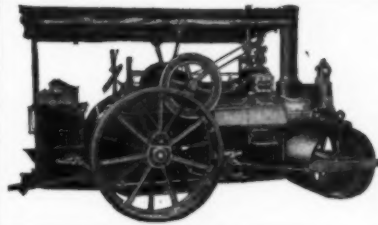
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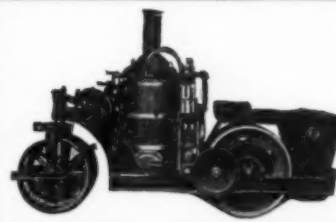


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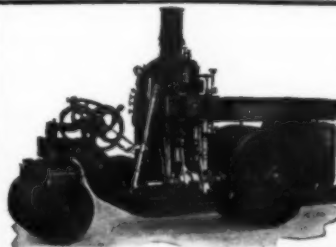


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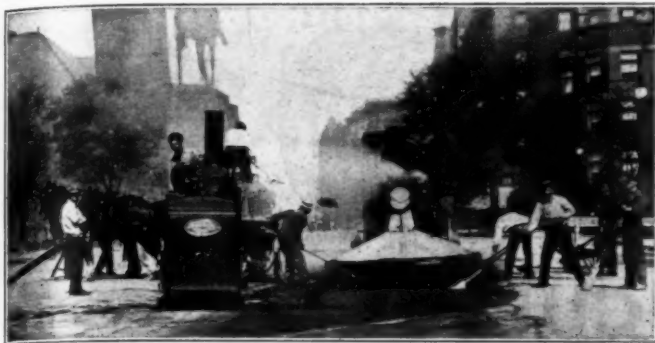
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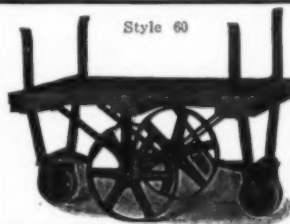
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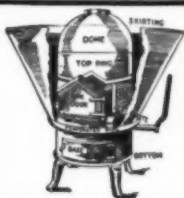
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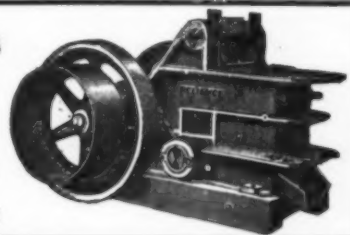
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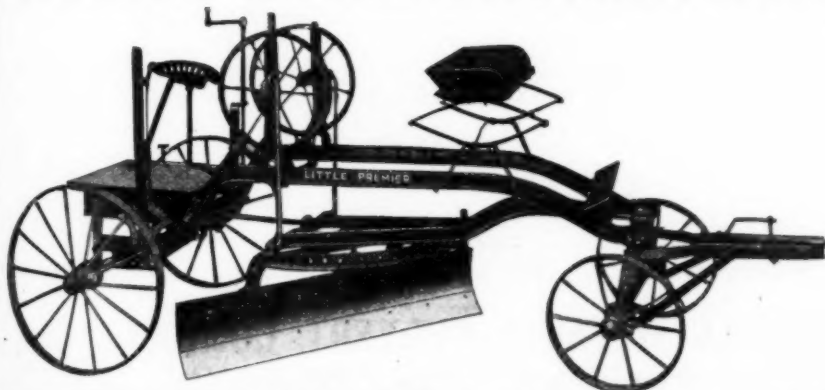
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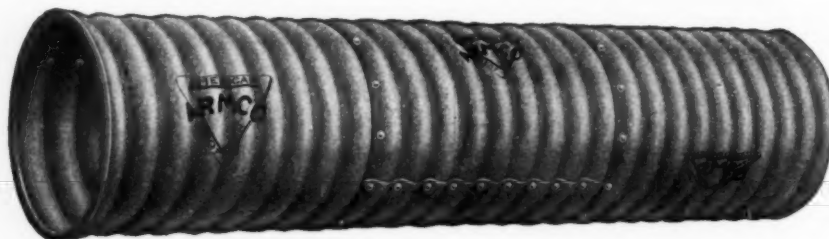
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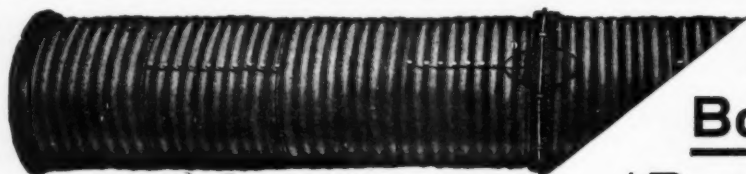
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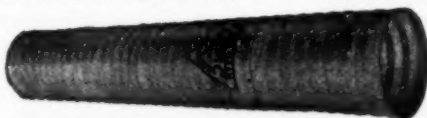
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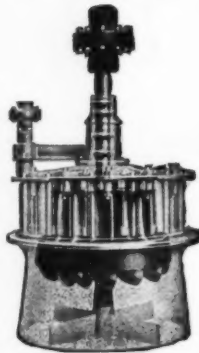
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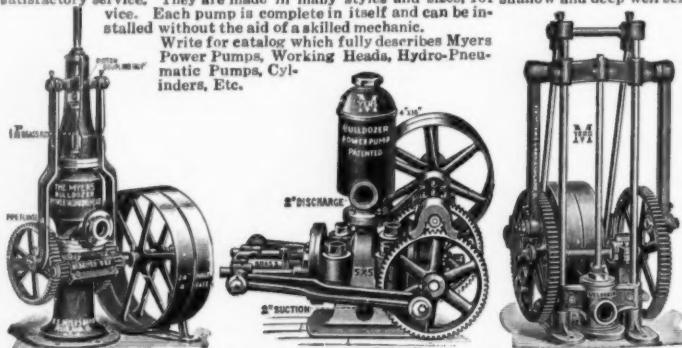


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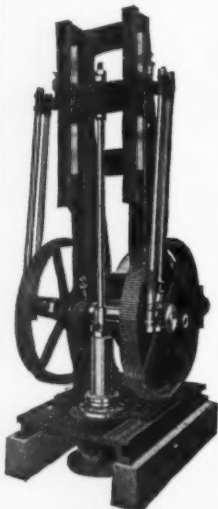
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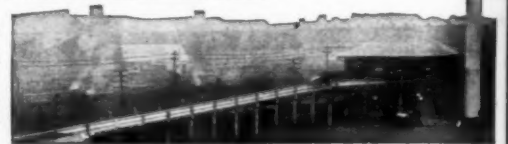
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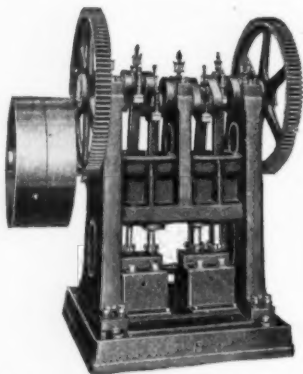
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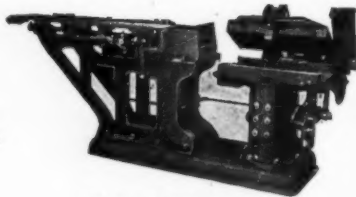
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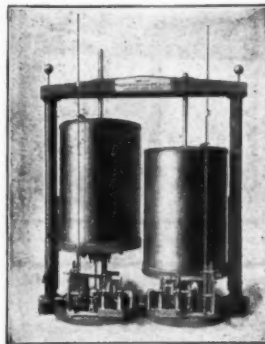
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Cheap electric power, numerous undeveloped water-powers, good home markets and excellent shipping facilities. Therefore, manufacturing conditions are ideal.

Many of the cities on the Central of Georgia railway occupy advantageous positions for distributing warehouses, and a number of the larger northern and eastern manufacturers supply their southeastern trade from branch houses in these cities.

Full and detailed information upon application.

J. M. MALLORY, Industrial Agent
SAVANNAH, GEORGIA

Free
Sites



Free
Sidings

RICHMOND, VA.

The gateway of the South and the home of the fifth district Regional Bank affords an advantageous location for factories and distributing warehouses.

Cheap Electric Power: Electric current in unlimited quantities at the low rate of 1 cent per kilowatt hour.

Abundant Labor: Site adjacent to the homes of approximately 35,000 mill operatives.

Shipping Facilities: Ample railway facilities to all sections of the country.

Climate: The favorable climate at Richmond allows more economical living and more healthful living than in sections where colder climate prevails.

Full Details on Request

Rappahannock Land & Development Corp.

Cor. 29th and P Streets

P. O. Box 54, Station B

RICHMOND, VA.

Attractive Factory Sites

ON THE

Illinois Central Railroad

For full particulars address the undersigned

Free books of information on farm lands issued by the
Illinois Central Railroad

ABOUT THE SOUTH

MISSISSIPPI—A WONDERFUL AGRICULTURAL STATE

LOUISIANA—NATURE'S GARDEN SPOT

MR. FARMER, THE YAZOO-MISSISSIPPI DELTA
IS CALLING YOU

THE PHILOSOPHY OF A NORTH MISSISSIPPI
FARM

SOUTH MISSISSIPPI, THE SETTLER'S CHANCE

Everyone who would like a Southern home or investment should have a
copy of one or all of these books. For free copies address

J. C. CLAIR

Industrial and Immigration Commissioner

ILLINOIS CENTRAL RAILROAD COMPANY

135 East 11th Place, CHICAGO, ILL.

THE WEST POINT ROUTE

Atlanta & West Point Railroad

THE WESTERN RAILWAY OF ALABAMA

Offers excellent locations for

Truck, Fruit, Stock and General Farming

Available Factory Sites. Abundance of Raw Material and Good Transportation Facilities
Write for information.

E. S. CENTER, General Agent, ATLANTA, GA.

Hosiery Mill Location

Will be glad to confer with interested parties
regarding excellent location for hosiery mill.
Splendid building now ready for machinery.

Healthful location, ample supply of labor, citizens
of community interested in seeing development
made.

Seaboard Air Line Railway

J. A. PRIDE, General Industrial Agent

NORFOLK, VA.

**Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina,
South Carolina, Tennessee, Virginia, Southern Illinois, Southern Indiana**

What We Offer You

THERE are millions of acres of the most productive farm, pasture and orchard lands in the South offering distinct advantages to homeseekers. Good farmers can make more money in the South from the labor and capital invested than elsewhere in America. Careful investigation will prove this and also that the most pleasant, healthful home conditions are in this section. One can find no better region for dairying, or for poultry and live stock raising. Abundant grasses and forage plants, pure water, the long grazing seasons, the low cost of production and the good markets make the South unequalled today in opportunities for these industries. Nearly all authorities who have studied the situation agree that this is so. For fruit and truck raising, for general or special farming, there are all conditions for success. Lands in good locations are to be had at lowest prices for equally productive lands anywhere.

The South not only offers the opportunity for farm homeseekers, but needs them. The Southern Railway Lines want settlers in their territory who can turn the available lands into highly productive places to furnish the foodstuffs necessary for the South itself and to take advantage of the outside markets which may be supplied. They are anxious to build up their territory as part of their efforts to make their own properties more productive.

For this reason their Industrial and Agricultural Department is maintained. Its co-operation is offered in every way possible to the homeseeker who will investigate the opportunities of the South; every assistance is extended which will enable him to find the location where are the home conditions he desires and which will give him prosperity. Immigration agents will advise with him. The information about lands, crops and the various sections and conditions along the roads, carefully collected by the companies, is at his command. Careful attention will be given to secure for him the special information desired on particular subjects or localities. Booklets and other printed matter will be sent on application.

After the homeseeker is located, trained and practical agricultural field agents, live stock, dairy and poultry agents familiar with local conditions will be at his service in solving any of the problems which his new location may bring. Market agents will help him to find the best market for his products.

What we do for the homeseeker, we also do for the manufacturer looking for a location for his plant. Industrial agents will help him solve the questions as to the proper point where raw materials may be satisfactorily assembled; where labor, power, transportation and market conditions are best; where necessary lands are properly located and to be had; where local capital, if wanted, will join in building the plant, and where all the other conditions which help to make the success of the industry and the welfare of its labor are to be found.

We offer our services in behalf of a territory reached by nearly 10,000 miles of railway, the people of that territory and a company which is earnestly at work in co-operation with every person or interest affected to build up the territory and advance the fortunes of those who are developing the lands and the many opportunities in the South.

Southern Railway
Southern Railway in Mississippi
Mobile & Ohio Railroad
Georgia Southern & Florida Ry.
Virginia & Southwestern Ry.
Augusta Southern Railroad

M. V. RICHARDS
Industrial and Agricultural Commissioner
WASHINGTON, D. C.

Danville & Western Railway
Tallulah Falls Railway
Blue Ridge Railway
Hawkinsville & Fla. South'n. Ry.
Macon & Birmingham Railway
Northern Alabama Railway

A Center Of Industry and Prosperity

Abounding not only in rich resources in minerals, timber and water-powers, but with a great cotton-growing section of the South on the one hand and the teeming West on the other, the new country opened up by the Clinchfield is indeed an "Empire in Possibilities."

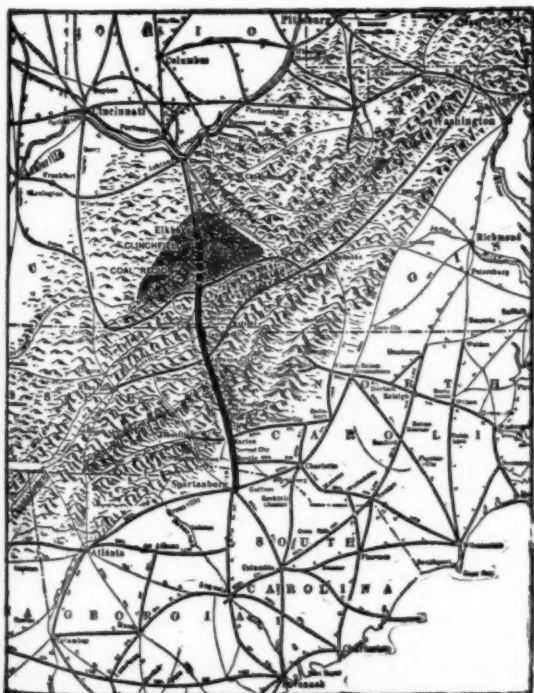
No other section close to the wonderful activities of a great nation can match in variety of opportunities this country, where since the time of man its resources have lain practically dormant, due to a lack of railroad facilities.

With the building of the Clinchfield, however, this rich country has been thrown open to the manufacturer, the investor and the farmer, and the native people are likewise awakening to the opportunities before them.

New industries are being established, new settlers locating, and on every hand can be seen indications pointing to the future greatness of this section as a center of industry and prosperity.

Investigations that have been made by experts especially employed by the Clinchfield more than verify every claim that has been made as to the quality and extent of the mineral, timber, water-power, agricultural and horticultural resources.

If you would take advantage of the opportunities offered in this new country, it is timely to investigate them now.



Any information desired covering business opening in this remarkable territory will be gladly furnished.

Carolina, Clinchfield & Ohio Rwy.

"THE ROAD OF OPPORTUNITY"

R. F. BREWER, Industrial Agent

Johnson City, Tenn.

Key West and The Panama Canal

It is an accepted fact that the Panama Canal will prove of vast importance to the commerce of the country generally.

It is also an accepted fact that the extension of the Florida East Coast Railway to Key West is only exceeded in importance by the Panama Canal, because Key West is nearer the Canal than any other American seaport.

At Key West the roads of water flowing in first meets the bands of steel running out; here traffic southbound first takes ship, and traffic northbound first takes train, and if this meeting means so much to so great a country, how overwhelming must be its meaning to the one small island and the one particular city where it occurs.

It means to Key West a rapid growth in population, a tremendous expansion in business, a vast development of industrial enterprises, a great influx of new men, new money, new interests.

It means the enlargement of present business concerns and the establishment of new ones, the building of manufacturing plants, the organization of jobbing houses, the installation of agencies for agricultural implement makers and manufacturers of machinery. It means the ushering in of a new era of business, of industry, of progress.

Men of energy and enterprise who wish to take advantage of the best that Key West has to offer—to enjoy to the full the benefits of the coming era of prosperity—will do well to look into the situation now.

The business interests of Key West as well as this railroad are keenly alive to the position which this city enjoys by reason of its proximity to the Panama Canal, and will gladly co-operate with those desiring to take advantage of the opportunities made available.

To investigate is to invest, and both should be done now.

FLORIDA EAST COAST RAILWAY

(FLAGLER SYSTEM)

J. E. INGRAHAM, Vice-President

ST. AUGUSTINE, FLA.

HOMESEEKERS' RATES FOR 1915

Seaboard Air Line Railway

The Progressive Railway of the South

Announces the Establishment of Attractive Round-Trip Homeseekers' Rates to Progressive Florida.

		FROM	
WASHINGTON, D. C.		CINCINNATI, OHIO	
On FIRST and THIRD TUES- DAYS in each month.		On FIRST and THIRD TUES- DAYS in each month.	
TO		TICKETS GOOD FOR 21 DAYS	
NORTH FLORIDA			
Live Oak.....	}	\$22.65	\$27.10
Lake City.....			
McClenny.....			
Glen St. Mary.....			
Quincy.....		24.55	25.60
Tallahassee.....		24.45	25.60
THE BEAUTIFUL LAKE COUNTRY			
Ocala.....	}	25.00	30.00
Orlando.....			
Oveido.....			
Leesburg.....			
Tavares.....			
POLK COUNTY HIGHLANDS			
Bartow and Lake Wales.....		25.00	30.00
PEERLESS PINELLAS			
St. Petersburg, Clearwater, Tarpon Springs, Elfers via Tampa	}	25.00	30.00
THE FAMOUS MANATEE COUNTY			
Palmetto, Parrish, Terra Ceia Bradentown, Bee Ridge, Oneco Manatee, Sarasota, Venice	}	25.00	30.00
HILLSBOROUGH COUNTY			
Tampa, Plant City.....		25.00	30.00

These tickets will be on sale at Washington, D. C. and Cincinnati, Ohio, on FIRST and THIRD TUESDAYS in each month—good for 21 days. You can stop at Jacksonville, Florida's greatest city. It will repay you. Stop-overs also south of Jacksonville going and returning.

The rates and service from the Nation's Capital, WASHINGTON, offers splendid opportunity to the people from the Eastern States to make a Florida trip cheaply and comfortably.

The CINCINNATI rates offer a similar opportunity to the people of the Central States. You can find attractive openings in the progressive State of Florida. We shall be glad to answer your inquiry for complete information.

SEABOARD AIR LINE RAILWAY

The Progressive Railway of the South

J. A. PRIDE, General Industrial Agent

NORFOLK, VIRGINIA

Abrasive Materials.

Carborundum Co., Niagara Falls, N. Y.
Vitrified Wheel Co., Westfield, Mass.

Accountants.

Armstrong, Allan Gordon, Norfolk, Va.
Baltimore Audit Co., Baltimore, Md.
Black & Co., Baltimore, Md.
Buck, Chester H., Chattanooga, Tenn.

Accumulator. (Hydraulic.)

The French Oil Mill Mchry. Co., Piqua, Ohio.

Agricultural Implements.

Myers & Bro., F. E., Ashland, O.

Air Compressors. (Stationary and Portable.)

Allis-Chalmers Mfg. Co., Milwaukee, Wis.
Chicago Pneumatic Tool Co., Chicago, Ill.
Clayton Air Compressor Plant, Cambridge, Mass.
De La Vergne Machine Co., New York, N. Y.
General Electric Co., Schenectady, N. Y.
Laidlaw-Dunn-Gordon Plant, Cincinnati, Ohio.
Sullivan Mchry. Co., Chicago, Ill.

Aluminum Products. (Bars, Sheets, Tubes.)

Aluminum Company of America, Pittsburgh, Pa.

Ammonia Valves and Fittings.

Frick Co., The, Waynesboro, Pa.

Anti-Friction Metals.

Bailey Lbby Co., Charleston, S. C.

Architects.

Diehl, Wm. Newton, Norfolk, Va.
Gatlin, W. R., Hopkinsville, Ky.
Grimmer & Toussaint, Tampa, Fla.
Kimball, Herbert S., Boston, Mass.
Milburn, Heister & Co., Washington, D. C.
Stribbe, J. E., Greenville, S. C.

Architects' Supplies.

Starrett Co., L. S., Athol, Mass.

Weber & Co., Philadelphia, Pa.

Architectural Iron Work.

Bolles Iron & Wire Wks., J. E., Detroit, Mich.
Chesapeake Iron Works, Baltimore, Md.
Dietrich Brothers, Baltimore, Md.
Schreiber & Sons Co., The L., Cincinnati, O.
Snead Architectural Iron Wks., Louisville, Ky.

Arc Lamps. (See Lamps) (Arc and Incandescent.)

Art Glass.

Binswanger & Co., Memphis, Tenn.

Asbestos.

Asbestos Protected Metal Co., Pittsburgh, Pa.
Southern Asbestos Mfg. Co., Inc., Richmond, Va.

Asbestos Products.

Asbestos Protected Metal Co., Pittsburgh, Pa.

John-Manville Co., H. W., New York, N. Y.

Asphalt.

Barber Asphalt Paving Co., Philadelphia, Pa.

Gulf Refining Co., Pittsburgh, Pa.

Standard Oil Co., Inc., Newark, N. J.

Texas Co., The, Houston, Tex.

U. S. Asphalt Refining Co., New York, N. Y.

Asphalt Mixers.

Equitable Asphalt Maintenance Co., Kansas City, Mo.

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Equitable Asphalt Maintenance Co., Kansas City, Mo.

Bearings. (Oilless.)

Graphite Lubricating Co., Bound Brook, N. J.
Metalline Co., Long Island City, N. Y.

Bedford Stone

Bedford Steam Stone Works, Bedford, Ind.

Belting. (Leather, Canvas, Rubber.)

American Supply Co., Providence, R. I.
Bally-Lobby Co., Charleston, S. C.
Baltimore Belting Co., Baltimore, Md.
Cameron & Barker Co., Charleston, S. C.
Chesapeake Belting Co., Baltimore, Md.
Druid Oak Belting Co., Inc., Baltimore, Md.
Frederick Belting Co., St. Louis, Mo.
Gandy Belting Co., Baltimore, Md.
Goodyear Tire & Rubber Co., Akron, Ohio.
Graton & Knight Mfg. Co., Worcester, Mass.
Main Belting Co., Philadelphia, Pa.
Schieren Co., Chas. A., New York, N. Y.
Smith-Courtesy Co., Richmond, Va.

Belting. (Chain.)

Bartlett & Snow Co., O. C., Cleveland, O.
Calkwell & Sons Co., H. W., Chicago, Ill.
Jeffrey Mfg. Co., Columbus, O.
Link-Belt Co., Philadelphia, Pa.

Belt Cement.

Graton & Knight Mfg. Co., Worcester, Mass.

Belt Conveyors.

Jeffrey Mfg. Co., Columbus, O.

Belt Dressing.

Dixon Crucible Co., Joseph, Jersey City, N. J.
Gandy Belting Co., Baltimore, Md.
Graton & Knight Mfg. Co., Worcester, Mass.

Belt Lacing. (Leather.)

Graton & Knight Mfg. Co., Worcester, Mass.

Belt Lacing and Supplies. [See Belting.

Leather, Canvas, Rubber.]

Bicarbonate Soda. (Sap Stain Lumber Dip.)

Church & Dwight Co., New York, N. Y.

Billets. (Basic Open Hearth Quality.)

Gulf States Steel Co., Birmingham, Ala.

Blackboards. (Slate.)

East Bangor Con. Slate Co., The, East Bangor, Pa.

Johnson, E. J., New York, N. Y.

Blocks. (Paving Cressed.)

American Concrete Works, New Orleans, La.

Block Fillers.

Barber Asphalt Paving Co., Philadelphia, Pa.
Barrett Mfg. Co., Phila. Pa.
Standard Oil Co., Newark, N. J.
U. S. Asphalt Refining Co., New York, N. Y.

Blowers and Exhaust Fans.

American Blower Co., Detroit, Mich.
Buffalo Forge Co., Buffalo, N. Y.
General Electric Co., Schenectady, N. Y.
Green Fuel Economizer Co., Mattawan, N. Y.
Raymond Bros. Impact Pulv. Co., Chicago, Ill.
South Atlantic Blow Pipe & Sheet Metal Co., Savannah, Ga.
Starvant Co., B. F., Hyde Park, Boston, Mass.

Blueprinters.

Childrey Co., Richmond, Va.

Bolters.

Habcock & Wilcox Co., New York, N. Y.
Cameron & Barker Co., Charleston, S. C.
Casey-Hedges Co., Chattanooga, Tenn.
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.
Chicago House Wrecking Co., Chicago, Ill.
Cincinnati Boiler Works, Cincinnati, O.
Cole Mfg. Co., R. D., Newnan, Ga.
Hartley Boiler Works, Montgomery, Ala.
Keeler Co., E., Williamsport, Pa.
Lookout Boiler & Mfg. Co., Chattanooga, Tenn.
Lombard Iron Works, Augusta, Ga.
Mecklenburg Iron Works, Charlotte, N. C.
Murray Iron Works, Burlington, Ia.
Phoenix Iron Works Co., Meadville, Pa.
Schofield Iron Works, Macon, Ga.
Southern Engine & Boiler Works, Jackson, Tenn.
Southern Boiler & Tank Works, Memphis, Tenn.
Valk & Murdoch Iron Works, Charleston, S. C.
Vogt Machine Co., Henry, Louisville, Ky.
Walsh & Weidner Boiler Co., Chattanooga, Tenn.
Zelnicke Supply Co., Walter A., St. Louis, Mo.

Boiler Covering.

Chesapeake Roofing & Pipe Covering Co., Inc., Baltimore, Md.

Boiler Graphite.

Dixon Crucible Co., Joseph, Jersey City, N. J.

Boiler Tubes. [See Tubes, Boiler.]

Boils, Nuts, Rivets, Studs and Washers.

Progressive Mfg. Co., Torrington, Conn.
Republic Iron & Steel Co., Youngstown, O.
Upon Nut Co., The, Cleveland, O.

Bonds. (Surety, etc.)

Fidelity & Deposit Co. of Balto., Baltimore, Md.

Bottling Outfits.

Viller Mfg. Co., Milwaukee, Wis.

Brass Goods.

Bailey-Lobby Co., Charleston, S. C.
Buckeye Iron & Brass Works, Dayton, O.
Lankenshaw Co., The, Cincinnati, Ohio
Powell Co., Wm., Cincinnati, O.

Brass Railing and Grilles.

Newman Mfg. Co., Cincinnati, Ohio

Brewers' Machinery.

Viller Mfg. Co., Milwaukee, Wis.

Brick. (Acid.)

Hood Brick Co., B. Mifflin, Atlanta, Ga.

Brick. (Building.)

Am. Enamelled Brick & Tile Co., New York, N. Y.
Brookhaven Pressed Brick & Mfg. Co., Brookhaven, Miss.
Hood Brick Co., B. Mifflin, Atlanta, Ga.
Hydraulic Press Brick Co., St. Louis, Mo.
Kingsport Brick Corp., Johnson City, Tenn.
Scott Brick Co., Alex. A., Knoxville, Tenn.
Standard Brick Co., Macon, Ga.

Brick. (Enamelled.)

Am. Enamelled Brick & Tile Co., New York, N. Y.

Brick. (Fire.)

Brookhaven Pressed Brick & Mfg. Co., Brookhaven, Miss.
Killian Fireproofing & Brick Works, Killian, S. O.
Louisville Fire Brick Works, Highland Park, Ky.
Mexico Brick & Fire Clay Co., Mexico, Mo.
Pomona Terra-Cotta Co., Pomona, N. O.
Standard Brick Co., Macon, Ga.
Stevens' Sons Co., H., Macon, Ga.
Union Mining Co., Mt. Savage, Md.

Brick. (Paving.)

Carlyle Paving Brick Co., Portsmouth, O.
Copeland-Ingles Shale Brick Co., Birmingham, Ala.
Dunn Wire-Out-Lag Brick Co., Conneaut, Ohio
Southern Clay Mfg. Co., Chattanooga, Tenn.
Southern Paving Brick Mfg. Assn., Birmingham, Ala.
Standard Brick Co., Macon, Ga.

Brick and Clayworking Machinery and Supplies.

Chase Fdry. & Mfg. Co., Columbus, O.
Fernholm Brick Machinery Co., St. Louis, Mo.
Freese & Co., E. M., Galion, O.
Steels & Sons, J. O., Statesville, N. C.

Bridges. (Concrete.)

Cunningham Construction Co., Shreveport, La.
Luten, Daniel B., Indianapolis, Ind.
Requarth Co., O. W., Charlotte, N. C.
Turner, O. A. P., Minneapolis, Minn.

Bridges. (Rolling Lift.)

Scherzer Rolling Lift Bridge Co., Chicago, Ill.

Bridges. (Steel.)

American Bridge Co. of New York, N. Y.
Belmont Iron Works, Philadelphia, Pa.
Case Crane & Engineering Co., Columbus Ohio.
Champion Bridge Co., Wilmington, Ohio.
Chicago Bridge & Iron Works, Chicago, Ill.
Cunningham Construction Co., Shreveport, La.
East St. Louis Bridge Co., East St. Louis, Ill.
Richmond Structural Steel Co., Richmond, Va.
Scherzer Rolling Lift Bridge Co., Chicago, Ill.
Vincennes Bridge Co., Vincennes, Ind.
Virginia Bridge & Iron Co., Roanoke, Va.

Bridge and Structural Iron Paints.

Chattanooga Paint Co., Chattanooga, Tenn.

Bridge Builders. (Timber.)

Murray & Co., Inc., W. D., Norfolk, Va.

Brimstones.

Union Sulphur Co., New York, N. Y.

Buckets. (Olan Shell.)

Hayward Company, New York, N. Y.

Williams Company, G. H., Cleveland, Ohio.

Buckets. (Dredging, Excavating, Sewer, etc.)

Hayward Co., New York, N. Y.
Mead-Morrison Mfg. Co., East Boston, Mass.
Monaghan Mch. Co., Chicago, Ill.
Williams Co., The G. H., Cleveland, O.

Buckets. (Grab.)

Hunt Co., Inc., O. W., West New Brighton, N. Y.

Buckets. (Orange Peel.)

Hayward Co., The, New York, N. Y.

Buckets. (Ore Handling.)

Caldwell & Son Co., H. W., Chicago, Ill.
Hayward Co., New York, N. Y.
Link-Belt Co., Philadelphia, Pa.
Williams Co., The G. H., Cleveland, O.

Buhr Stones.

Starr Co., B. F., Baltimore, Md.

Builders and Contractors.

Interstate Const. Co., Louisville, Ky.
Stone & Webster Eng. Corp., Boston, Mass.
Turner, O. A. P., Minneapolis, Minn.
White Companies, J. G., New York, N. Y.

Building Stone

Atlantic Stone Co., Atlanta, Ga.

Bedford Steam Stone Works, Bedford, Ind.

Building Supplies.

Chicago House Wrecking Co., Chicago, Ill.
Southern Building Material Co., Norfolk, Va.

Burners. (Oil.) [See Fuel Oil Equipments.]

Bushings. (Graphite, Bronze and Wood.)

Graphite Lubricating Co., Bound Brook, N. J.

Bushings. (Oilless.)

Graphite Lubricating Co., Bound Brook, N. J.

Metalline Co., Long Island City, N. Y.

Cables.

Broderick & Bascom Rope Co., St. Louis, Mo.

Roebeling's Sons Co., John A., Trenton, N. J.

Cables and Wires. (Insulated.)

American Steel & Wire Co., Chicago, Ill.

Cableways. (Overhead Suspension.)

Amburn Co. (Tramway Department, New York, N. Y.)

Broderick & Bascom Rope Co., St. Louis, Mo.

Flory Mfg. Co., S. Bangor, Pa.

Lidgerwood Mfg. Co., New York, N. Y.

Roebeling's Sons Co., John A., Trenton, N. J.

Can and Box Making Machinery. (Tin.)

Ans Machine Co., Max, Mt. Vernon, N. Y.

Bliss Co., E. W., Brooklyn, N. Y.

Canning Machinery and Supplies.

Robins & Co., A. K., Baltimore, Md.

Sprague Canning Machinery Co., Chicago, Ill.

Carborundum Paper and Cloth.

Carborundum Co., Niagara Falls, N. Y.

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Ford, Bacon & Davis, New York, N. Y.
McCrory & Co., J. B., Atlanta, Ga.
Rucker, B. Parks, Charlotte, N. C.

MECHANICAL

Arnold Co., The, Chicago, Ill.
Graves Engineering Co., Inc., New York, N. Y.
Kelly, Thos. G., Cincinnati, Ohio.
Lide, Martin J., Birmingham, Ala.
McLundie, A. S., Chattanooga, Tenn.
Mende, Richard K., Baltimore, Md.
Stevens, Harry, Washington, D. C.
Tucker & Laxton, Charlotte, N. C.

MINING

Brown & Clarkson, Washington, D. C.
Grimsley, G. P., Martinsburg, W. Va.
Hogue Engineering Ass'n, Charleston, W. Va.
Jones, E. M., Chattanooga, Tenn.
Renshaw & Breece, Huntington, W. Va.

MUNICIPAL

Anderson & Christie, Charlotte, N. C.
Brown & Clarkson, Washington, D. C.
Crosby, Walter W., Memphis, Tenn.
Dabney Engineering Co., Memphis, Tenn.
Elrod, Henry E., Dallas, Texas.
Graves Engineering Co., Inc., New York, N. Y.
Greiner & Whitman, Baltimore, Md.
Havely, H. B., Monroe, N. C.
Hayward & Ashby Rocky Mount, N. C.
Hogue Engineering Ass'n, Charleston, W. Va.
Knowles, Morris, Pittsburgh, Pa.
McCrory Bros. & Cheves, Inc., Charleston, S. C.
McCrory Co., J. B., Atlanta, Ga.
Moore & Thomas, Vicksburg, Miss.
Pew, Arthur, Atlanta, Ga.
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Walker Engineering Corp., Tampa, Fla.
White, Gilbert O., Charlotte, N. C.

PAVING AND ROAD

Anderson & Christie, Charlotte, N. C.
Atlantic Engineering Co., Savannah, Ga.
Crosby, Walter W., Baltimore, Md.
Elrod, Henry E., Dallas, Texas.
Havely, H. B., Monroe, N. C.
Institute of Industrial Research, Washington, D. C.
McCrory Bros. & Cheves, Inc., Charleston, S. C.
Moore & Thomas, Vicksburg, Miss.
Shand Engineering Co., Columbia, S. C.
White, Gilbert O., Charlotte, N. C.

PUBLIC SERVICE PROPERTIES

Day & Zimmerman, Philadelphia, Pa.
Ferree Co., The, H. G., Memphis, Tenn.
Ford, Bacon & Davis, New York, N. Y.
Gilman, Harry L., Boston, Mass.
Graves Engineering Co., Inc., New York, N. Y.
Scotfield Engineering Co., Philadelphia, Pa.
Stone & Webster Engr. Corp., Boston, Mass.
Walker, Francis R., Washington, D. C.
White Companies, J. G., New York, N. Y.

REINFORCED CONCRETE (Bridges, Buildings, etc.)

Cunningham Construction Co., Shreveport, La.
Elford, E., Columbus, O.
Foster & Creighton Co., Nashville, Tenn.
Guarantee Construction Co., New York, N. Y.
Hayward & Ashby, Rocky Mount, N. C.
Interstate Const. Co., Louisville, Ky.
Luten, Daniel B., Indianapolis, Ind.
Martin Co., A. J., Portsmouth, Ohio.
Requarth Co., C. W., Charlotte, N. C.
Savannah Eng. & Construction Co., Savannah, Ga.
Spiker, William O., Atlanta, Ga.
Tucker & Laxton, Charlotte, N. C.
White Companies, J. G., New York, N. Y.

RIVER AND HARBOR

Gilman, Harry L., Boston, Mass.

SEWERAGE AND WATER-WORKS

Anderson & Christie, Charlotte, N. C.
Brown & Clarkson, Washington, D. C.
Dabney Engineering Co., Memphis, Tenn.
Ford, Bacon & Davis, New York, N. Y.
Greiner & Whitman, Baltimore, Md.
Havely, H. B., Monroe, N. C.
Hill, Nicholas S., Jr., and S. F. Ferguson, New York, N. Y.
Knowles, Morris, Pittsburgh, Pa.
Mayer, J. H., Birmingham, Ala.
Miller, Hiram Allen, Boston, Mass.
Myers, E. W., Greensboro, N. C.
Pew, Arthur, Atlanta, Ga.
Quick, Alfred M., Baltimore, Md.
Stevens, Harry, Washington, D. C.
Walker Engineering Corp., Tampa, Fla.
White Companies, J. G., New York, N. Y.
White, Gilbert O., Charlotte, N. C.

STEEL WORK AND ROLLING MILLS

Smythe Co., The S. R., Pittsburgh, Pa.

STRUCTURAL STEEL

Foster & Creighton Co., Nashville, Tenn.
Shearer, O. E., Memphis, Tenn.
Spiker, Wm. C., Atlanta, Ga.
Renshaw & Breece, Huntington, W. Va.

THEATER CONSTRUCTION

Gallin, W. R., Hopkinsville, Ky.

Engines

COMPRESSED AIR

Dake Engine Co., Grand Haven, Mich.

GAS AND GASOLINE

Affiliated Manufacturers Co., Milwaukee, Wis.
Allis-Chalmers Manufacturing Co., Milwaukee, Wis.
Bruce-Macbeth Engine Co., Cleveland, O.
Cooper Co., O. & G., Mt. Vernon, Ohio.
De La Vergne Machine Co., New York, N. Y.
Gas Engineering Co., Trenton, N. J.
Mietz, A., New York, N. Y.
Portsmouth Engine Co., Portsmouth, O.
Southern Engine & Boiler Works, Jackson, Tenn.
Van Duzen, Royce O., The, Columbus, O.
Westinghouse Machine Co., The, Pittsburgh, Pa.

OIL

Bolinders Co., New York, N. Y.
Chicago Pneumatic Tool Co., Chicago, Ill.
De La Vergne Machine Co., New York, N. Y.
Fairbanks-Morse & Co., Atlanta, Ga.
Meitz, A., New York, N. Y.
Moore & Sons Corp., Samuel L., Elizabeth, N. J.
Power Mfg. Co., Lima, Ohio.
Snow Steam Pump Plant, The, New York, N. Y.

STEAM

Allis-Chalmers Manufacturing Co., Milwaukee, Wis.
Ball Engine Co., Erie, Pa.
Buffalo Forge Co., Buffalo, N. Y.
Cameron & Barkley Co., Charleston, S. C.
Chicago House Wrecking Co., Chicago, Ill.
Cooper Co., O. & G., Mt. Vernon, O.
Dake Engine Co., Grand Haven, Mich.
Griffith & Wedge Co., The, Zanesville, O.
Houston, Stanwood & Gamble Co., Cincinnati, O.
Laffel & Co., James, Springfield, O.
Lombard Iron Works, Augusta, Ga.
Mecklenburg Iron Works, Charlotte, N. C.
Murray Iron Works Co., Burlington, Ia.
Phoenix Iron Works Co., Headville, Pa.
Schiffel Iron Works, Macon, Ga.
Sturtevant Co., B. F., Hyde Park, Boston, Mass.
Viller Mfg. Co., Milwaukee, Wis.
Westinghouse Machine Co., Pittsburgh, Pa.

Envelopes.

Conng & Selden Co., Baltimore, Md.

Excavating Machinery

American Clay Machinery Co., The, Bucyrus, Ohio.
American Steel Dredge Co., Fort Wayne, Ind.
Bay City Dredge Works, Bay City, Mich.
Byers Mach. Co., The John F., Ravenna, O.
Economy Excavator Co., Iowa Falls, Iowa.
Fairbanks Steam Shovel Co., Marion, O.
Hayward Co., New York, N. Y.
Jeffrey Mfg. Co., Columbus, O.
Lidgerwood Mfg. Co., New York, N. Y.
Marion Steam Shovel Co., Marion, O.
Monaghan Machine Co., Chicago, Ill.
Morris Machine Works, Baldwinville, N. Y.
National Hoisting Engine Co., Harrison, N. J.
The Automatic Shovel Co., Lorain, Ohio.
Williams Co., The G. H., Cleveland, O.

Excavators. (Trench.)

Bay City Dredge Works, Bay City, Mich.
Economy Excavator Co., Iowa Falls, Iowa.
Fairbanks Steam Shovel Co., Marion, O.
Hayward Co., The, New York, N. Y.
Monaghan Machine Co., Chicago, Ill.

Excelsior Machinery

Kline, Lewis T., Alpena, Mich.

Exhaust Heads

American Spiral Pipe Works, Chicago, Ill.

Exhibits. (Machinery Builders' Equipment and Supplies.)
Builders' Exchange, Baltimore, Md.

Expansion Joints

Badger & Sons Co., E. B., Boston, Mass.

Expansion Joints. (Street and Road.)

Philip Carey Co., The, Cincinnati, Ohio.

Expanded Metal. [See Lath.]

Explosives

Du Pont Powder Co., Wilmington, Del.

Etna Explosive Co., Inc., Emporium, Pa.

Export Agents. (South America.)

Lutz, Friedr. W., Richmond, Va.

Factory Sites. (Town and Railroad.) [See Industrial, Agricultural and Commercial Opportunities.]

Fans. (Electric.)

General Electric Co., Schenectady, N. Y.

Fans. (Ventilating.) [See Blowers, Exhaust Fans.]

Fastener Driving Machine. (Corrugated Joint.)

Saranac Machine Co., Benton Harbor, Mich.

Feed-Water Heaters and Purifiers

American Water Softener Co., Philadelphia, Pa.

Blake & Knowles Steam Pump Works, East Cambridge, Mass.

Murray Iron Works Co., Burlington, Ia.

National Pipe Bending Co., New Haven, Conn.

Scalf & Sons Co., Wm. B., Pittsburgh, Pa.

Stewart Heater Co., Buffalo, N. Y.

Feed-Water Heater and Purifier and Oil Separator Combined

Blake & Knowles Steam Pump Works, East Cambridge, Mass.

Platt Iron Works Co., Dayton, Ohio.

Stewart Heater Co., Buffalo, N. Y.

Felt. (Building, Sheathing.)

Barrett Mfg. Co., Philadelphia, Pa.

Fencing. (Corrugated, Galvanized, Concrete.)

Amer. Sheet & Tin Plate Co., Pittsburgh, Pa.

Fencing. (Woven Wire Field.)

American Steel & Wire Co., Chicago, Ill.

Cyclone Fence Co., Waukegan, Ill.

Gulf States Steel Co., Birmingham, Ala.

Fencing, Entrance Gates. (Iron, Steel, Wire.)

American Steel & Wire Co., Chicago, Ill.

Bolles Iron & Wire Works, J. E., Detroit, Mich.

Cincinnati Iron Fence Co., Cincinnati, Ohio.

Cyclone Fence Co., Waukegan, Ill.

Dow Wire & Iron Works, Louisville, Ky.

Dufur & Co., Baltimore, Md.

Eureka Supply Co., Chattanooga, Tenn.

New Jersey Wire Cloth Co., Trenton, N. J.

Ohio Elevator & Mach. Co., The, Columbus, O.

Fertilizer Machy. [See also Phosphate Mch.]

K-B Pulverizer Co., Inc., New York, N. Y.

Stedman's Foundry & Machine Works, Aurora, Ind.

Valk & Murdoch Iron Works, Charleston, S. C.

Files

Barnett Co., G. & H., Philadelphia, Pa.

Nicholson File Co., Providence, R. I.

Filters. (Water for Domestic and Industrial Purposes.)

American Water Softener Co., Philadelphia, Pa.

International Filter Co., Chicago, Ill.

New York Con. Jewell Fil. Co., New York, N. Y.

Fire Clay. [See Brick, Fire.]

Fire Door Fixtures

Richmond Safety Gate Co., Richmond, Ind.

Victor Mfg. Co., Newburyport, Mass.

Fire Extinguishers

Badger & Sons Co., E. B., Boston, Mass.

Fire Escapes

Bolles Iron & Wire Works, J. E., Detroit, Mich.

Chesapeake Iron Works, Baltimore, Md.

Eureka Supply Co., Chattanooga, Tenn.

Fire Hose

Eureka Fire Hose Mfg. Co., New York, N. Y.

Fire Places. (Brick and Tile.)

Hood Brick Co., B. Mifflin, Atlanta, Ga.

Fireproof Building Construction. [See Concrete Construction.]

Fireproof Building Material

Bannon Pipe Co., P., Louisville, Ky.

Johns-Manville Co., H. W., New York, N. Y.

Fireproof Doors and Shutters

Kinnear Mfg. Co., Columbus, O.

Richmond Safety Gate Co., Richmond, Ind.

Victor Mfg. Co., Newburyport, Mass.

Wagner's Sons Co., J. F., Louisville, Ky.

Wilson Corp., J. G., New York, N. Y.

Fireproof Windows. [See Window Frames and Sashes (Fireproof).]

Waterbury Co., New York, N. Y.

Fittings. (Wire Rope.)

Waterbury Co., New York, N. Y.

Fireproofing. (Brick and Tile.)

Hood Brick Co., B. Mifflin, Atlanta, Ga.

Flanges. (Iron and Steel.)

American Cast Iron Pipe Co., Birmingham, Ala.
American Pipe & Construction Co., Phila., Pa.
American Spiral Pipe Works, Chicago, Ill.
Dart Mfg. Co., E. M., Providence, R. I.
Giamorgan Pipe & Foundry Co., Lynchburg, Va.
U. S. Cast Iron Pipe & Fdry. Co., Burlington, N. J.
Wood & Co., R. D., Philadelphia, Pa.

Flooring. (Composition.)

Petro-Pulp Floor Co., Kansas City, Mo.

Flooring. (Crescoted Block.)

Republic Crescoting Co., Indianapolis, Ind.

Flooring. (Hardwood, Maple, Oak.)

Whiting, William S., Elizabethton, N. C.

Flour and Grist Mill Machinery and Supplies

Caldwell & Sons Co., H. W., Chicago, Ill.
Salem Foundry & Machine Works, Salem, Va.
Starr Co., B. F., Baltimore, Md.
Wolf Co., Chambersburg, Pa.

Flue Lining

Owensboro Sewer Pipe Co., Owensboro, Ky.

Southern Sewer Pipe Co., Birmingham, Ala.

Forges

Buffalo Forge Co., Buffalo, N. Y.

Forgings

Welmer Chain & Iron Co., Lebanon, Pa.

Foundations. (Waterproof.)

Requarth Co., C. W., Charlotte, N. C.

Foundry Equipment and Supplies

Hill-Branner Fdry. Supply Co., Cincinnati, O.

Newport Sand Bank Co., Inc., Newport, Ky.

Foundry Facings. (Talc and Soapstones.)

Georgia Talc Co., Asheville, N. C.

Hill-Branner Fdry. Supply Co., Cincinnati, O.

Foundry and Machine Shops

Giamorgan Pipe & Foundry Co., Lynchburg, Va.

Goldens Foundry & Machine Wks., Columbus, Ga.

Granger & Co., Inc., Louisville, Ky.

Lombard Iron Works, Augusta, Ga.

Titus, E. E., Petersburg, Va.

Valk & Murdoch Iron Works, Charleston, S. C.

Frogs. [See Railroad Frogs and Switches.]

Fuel Economizer

Green Fuel Economizer Co., Natick, Mass.

Sturtevant Co., B. F., Hyde Park, Boston, Mass.

Fuel Oil

Gulf Refining Co., Pittsburg, Pa.

Texas Co., The, Houston, Tex.

U. S. Asphalt Refining Co., New York, N. Y.

Furnaces. (For Industrial Purposes.)

Smythe Co., The S. R., Pittsburgh, Pa.

Furniture. (Metal.)

The Van Dorn Iron Works Co., Cleveland, Ohio.

Fuses. (Electrical.)

Economy Fuse & Mfg. Co., Chicago, Ill.

Fuse Shells. (Renewable.)

Economy Fuse & Mfg. Co., Chicago, Ill.

Fuses, Bases and Fittings

Johns-Manville Co., H. W., New York, N. Y.

Galvanized Steel and Iron

American Sheet & Tin Plate Co., Pittsburgh, Pa.

La Belle Iron Works, Schenectady, O.

McCalla, C. Harold, Philadelphia, Pa.

Whitaker-Gleason Co., Portsmouth Plant, Portsmouth, Ohio.

Wood Iron & Steel Co., Alan, Philadelphia, Pa.

Youngstown Sheet & Tube Co., Youngstown, O.

Galvanizing Machinery. (Sheet.)

Erie Foundry Co., Erie, Pa.

Garage and House. (Portable.)

Dixie Culvert & Metal Co., Atlanta, Ga.

Steel Products Co., The, Savannah, Ga.

Garbage Disposal Plants

Stacy-Bates Co., Minneapolis, Minn.

Gas Blowers. (Turbine.)

Terry Steam Turbine Co., Hartford, Conn.

Gas Engines. [See Engines, Gas.]

Kemp Mfg. Co., O. M., Baltimore, Md.

Milburn Co., Alex. N., Baltimore, Md.

Gas Plants

Gas Engineering Co., Trenton, N. J.

Power & Mining Machinery Co., Ouday, Wis.

Western Gas Construction Co., Ft. Wayne, Ind.

Gas Producers

Smythe Co., The S. R., Pittsburgh, Pa.

Westinghouse Machine Co., Pittsburgh, Pa.

Wood & Co., R. D., Philadelphia, Pa.

Gasoline and Kerosene

Gulf Refining Co., Pittsburg, Pa.

Texas Co., The, Houston, Tex.

Gas and Steam Fitters' Tools

Saunders' Sons, D., Yonkers, N. Y.

Gears

Caldwell & Sons Co., H. W., Chicago, Ill.

Oresson-Morris Co., Philadelphia, Pa.

James Mfg. Co., D. O., Chicago, Ill.

Jeffrey Mfg. Co., Columbus, O.

Generating Sets

Sturtevant Co., B. F., Hyde Park, Boston, Mass.

Triumph Electric Co., Cincinnati, O.

Geologists

Davis, Geo. C., Phila., Pa.

Fröthing & Robertson, Richmond, Va.

Grimsley, G. P., Martinsburg, W. Va.

Glass. (Plate, etc.)

Binewanger & Co., Memphis, Tenn.

Governors. (Steam Engine.)

Pickering Governor Co., Portland, Conn.

Grain Elevator Supplies

Caldwell & Sons Co., H. W., Chicago, Ill.

RAILROADS

Atlanta & West Point R. R., Atlanta, Ga.
Carolina, Clinchfield & O. Ry., Johnson City, Tenn.
Central of Georgia Ry., Savannah, Ga.
Florida East Coast Ry., St. Augustine, Fla.
Illinois Central Railroad Co., Chicago, Ill.
Norfolk & Western Railway, Norfolk, Va.
Seaboard Air Line, Norfolk, Va.
Southern Railway System, Washington, D. C.

Industrial Track Work. [See Railways, Ind.]

Injectors.

Jenkins Bros., New York, N. Y.
Lunkenheimer Co., The, Cincinnati, O.
Randle Machinery Co., Cincinnati, O.
Sellers & Co., Inc., Wm., Philadelphia, Pa.

Insulating Materials.

General Electric Co., Schenectady, N. Y.
John-Manville Co., H. W., New York, N. Y.

Insurance.

Hartford Steam Boiler Inspector & Insurance Co., Hartford, Conn.

Investment Securities.

Leach & Co., A. B., New York, N. Y.
New First National Bank, Columbus, O.
Powell, Garard & Co., Chicago, Ill.
Provident Savings Bank & Trust Co., Cincinnati, Ohio.

Iron.

Allegheny Steel Co., Pittsburgh, Pa.
La Belle Iron Works, Steubenville, O.
Republic Iron & Steel Co., Youngstown, O.
Tennessee Coal, Iron & R. R. Co., Birmingham, Ala.
Union Drawn Steel Co., Beaver Falls, Pa.
Wood Iron & Steel Co., Alan, Philadelphia, Pa.

Irrigation Machinery.

Cameron Steam Pump Wks., A. S. New York, N. Y.

Joist Hangers.

The Van Dorn Iron Works Co., Cleveland, Ohio

Kettles. (Steam Jacket.)

Badger & Sons Co., E. H., Boston, Mass.

Lace Leather.

Grahn & Knight Mfg. Co., Worcester, Mass.

Lamps. (Arc and Incandescent.)

Boston-Economy Lamp Division, National Lamp Works of General Electric Co., Danvers, Mass.
General Electric Co., Schenectady, N. Y.
Piedmont Electric Co., Asheville, N. O.

Lamps. (Carbon and Tungsten.)

Newman Electric Lamp Co., Cincinnati, O.

Lamp Posts. (Electric, Gas.)

Western Gas Construction Co., Ft. Wayne, Ind.

Lands. (Mineral, Timber, Farm, etc.) [See Industrial, Agricultural and Commercial Opportunities.]

Landscape Architects (See Engineers.) [Landscape]

Lathes. (Engine.)

Greaves, Kinsman Tool Co., The, Cincinnati, O.

Lawn Furniture. (Wire.)

Bolles Iron & Wire Works, J. E., Detroit, Mich.
Cincinnati Iron Fence Co., Cincinnati, Ohio.
DeFar & Co., Baltimore, Md.
Dufur, Baggett & Co., Baltimore, Md.

Lights. (Portable Acetylene.)

Milburn Co., Alex. N., Baltimore, Md.

Liquor Filters.

International Filter Co., Chicago, Ill.

Lithographers, Engravers.

Young & Selden Co., Baltimore, Md.

Lockers (Steel)

Keighly Metal Ceiling Mfg. Co., S., Pittsburgh, Pa.

Locomotives.

Baldwin Locomotive Wks., The, Philadelphia, Pa.
Climax Mfg. Co., Corry, Pa.
Cord, Geo. B., Cincinnati, O.
Davenport Locomotive Works, Davenport, Ia.
Fate Co., J. D., Plymouth, Ohio.
Jeffrey Mfg. Co., Columbus, O.
Lima Locomotive Corporation, Lima, O.
Porter Co., H. K., Pittsburgh, Pa.
Southern Iron & Equipment Co., Altan s, Ga.
Thaw & Williams, Cincinnati, O.

RAILWAY.

Baldwin Locomotive Wks., The, Philadelphia, Pa.
Lima Locomotive Corporation, Lima, O.
Porter Co., H. K., Pittsburgh, Pa.

Looms and Weaving Machinery.

Crompton & Knowles Loom Works, Worcester, Mass.
Cramer Co., Hopkinton, Mass.
Mason Machine Works, Taunton, Mass.
Saco-Lowell Shops, Boston, Mass.

Loom Harness.

American Supply Co., Providence, R. I.

Lubricants.

Albany Lubricating Co., New York, N. Y.
Oils Elevator Co., New York, N. Y.

Lubricants. (Graphite.)

Dixon Crucible Co., Joseph, Jersey City, N. J.

Lumber.

Industrial Lumber Co., Elizabeth, La.

Lumber. (Creosoted.)

American Creosote Works, New Orleans, La.
National Lumber & Creosoting Co., Texarkana, Ark.

Lumber. (Heavy Construction, Pitch Pine, etc.)

Industrial Lumber Co., Elizabeth, La.
National Lumber & Creosot. Co., Texarkana, Ark.

Lumber Buggies.

Soule Steam Feed Works -Meridian, Miss.

Lumber Stackers.

Soule Steam Feed Works, Meridian, Miss.

Machinery. (Special.)

Bliss Co., E. W., Brooklyn, N. Y.
Eagle Mfg. Co., Cincinnati, Ohio.
Elmer Lewis T., Alpena, Mich.
Universal Machine Co., Baltimore, Md.

Machinery and Supplies. (New and Second-Hand Bargains.)

Assets Purchasing Co., Wheeling, W. Va.
Birtwell, W. L., Phila., Pa.
Central Transfer Co., Baltimore, Md.
Chicago House Wrecking Co., Chicago, Ill.
Cleveland Belling & Machinery Co., Cleveland, O.
Derrick & Harvey Mch. Co., Baltimore, Md.
Duzate & Son, New York, N. Y.

Eagle Pipe Supply Co., Inc., New York, N. Y.
Empire Mch. & Supply Corp., Norfolk, Va.
Lehman, Charles T., Birmingham, Ala.
Lodge & Shipley Mch. Tool Co., Cincinnati, O.
Marine Metal & Supply Co., New York, N. Y.
Moore & Co., Edgar M., Pittsburgh, Pa.
New River Co., Macdonald, W. Va.
Nussbaum & Co., V. M., Fort Wayne, Ind.
Pannueller Engineering Co., Chicago, Ill.
Power Equipment Co., New York, N. Y.
Prentiss Tool & Supply Co., New York, N. Y.
Randle Machinery Co., Cincinnati, O.
Read Co., Howard W., Philadelphia, Pa.
Sammel, Frank, Philadelphia, Pa.
Seyfer's Sons, Inc., E. Co., Philadelphia, Pa.
Tampa Machinery Exchange, Tampa, Fla.
Thaw & Williams, Cincinnati, O.
Toomey, Frank, Inc., Philadelphia, Pa.
Wilson Mch. Co., St. Louis, Mo.

Machine Tools.
Greaves, Kinsman Tool Co., The, Cincinnati, O.

Machinists. (Engineers.)

Universal Machine Co., Baltimore, Md.

Magnesia Materials.

John-Manville Co., H. W., New York, N. Y.

Magnetic Separators.

Buchanan & Co., Inc. O. G., New York, N. Y.

Mail Chutes.

Outlier Mail Chute Co., Rochester, N. Y.

Mechanical Draft.

Buffalo Forge Co., Buffalo, N. Y.
Starlevant Co., B. F., Hyde Park, Boston, Mass.

Metal Ceilings. [See Ceilings, Metal.]

Metaline.

Metaline Co., Long Island City, N. Y.

Metal. (For Tanks, Culverts, Roofing, etc.)

Whitaker-Greaser Co., Portsmouth Plant, Portsmouth, Ohio.

Metal Culverts. [See Culverts.] (Corrugated Metal.)

Metal Shingles. [See Shingles.] (Metal.)

Metal Window Frames and Sash. [See Window Frames and Sash.] (Fireproof.)

Metal Work. [See Sheet Metal Work.]

Metal-Working Machinery. (Sheet.)

Bliss Co., E. W., Brooklyn, N. Y.

Meters. (Water.)

Alberger Pump & Condenser Co., New York, N. Y.

Meter Boxes, Couplings, Gauges. (Water.)

Clark Co., H. W., Mattoon, Ill.

Micrometers, Calipers, etc.

Starrett Co., L. S., Athol, Mass.

Milk Filters. (Liquor, Milk, etc.)

International Filter Co., Chicago, Ill.

Mill Engineers and Architects.

O'Brian, W. C., Memphis, Tenn.
Sirrino, J. E., Greenville, S. C.

Mill Machinery and Supplies.

Bailey-Lebby Co., Charleston, S. C.
Cameron & Barkley Co., Charleston, S. C.
Empire Mch. & Supply Corp., Norfolk, Va.
Gainesville Iron Works, Gainesville, Ga.
Lombard Iron Works, Augusta, Ga.
Lunkenheimer Co., The, Cincinnati, O.
Mecklenburg Iron Works, Charlotte, N. C.
Salem Foundry & Machine Wks., Salem, Va.
Starr Co., B. F., Baltimore, Md.
Wolf Co., Chambersburg, Pa.

Mining Machinery. (Gold, Copper, Plate, etc.)

Bartlett & Snow Co., G. O., Cleveland, O.
Jeffrey Mfg. Co., Columbus, O.
McLannahan-Stone Mach. Co., Hollidaysburg, Pa.
Mecklenburg Iron Works, Charlotte, N. C.
Raymond Bros. Impact Pulv. Co., Chicago, Ill.

Mixers. (Concrete.)

Milwaukee Concrete Mixer Co., Milwaukee, Wis.
Van Dusen, Roy Co., The, Columbus, O.

Mixing Machinery.

Donning, W. D., Syracuse, N. Y.

Mortar Colors.

Chattanooga Paint Co., Chattanooga, Tenn.

Motor Trucks. (Gasoline.)

White Co., The, Cleveland, O.

Motor Trucks. (Second Hand.)

Mar-Del Mobile Co., Baltimore, Md.

Music Wire.

American Steel & Wire Co., Chicago, Ill.
Waterbury Co., The, New York, N. Y.

Nails. (Cut.)

La Belle Iron Works, Steubenville, O.

Nails and Spikes.

La Belle Iron Works, Steubenville, Ohio.
Republic Iron & Steel Co., Youngstown, O.
Youngstown Sheet & Tube Co., Youngstown, O.

Nuts. [See Bolts, Nuts, Rivets, etc.]

Oil. (Creosoted.)

Bartlett Mfg. Co., Philadelphia, Pa.

Oils. (Lubricating, Etc.)

Albany Lubricating Co., New York, N. Y.
Galena Signal Oil Co., Franklin, Pa.
Gulf Refining Co., Pittsburgh, Pa.
Robinson & Son Co., Wm. O., Baltimore, Md.
Texas Co., The, Houston, Tex.

Oil Cans.

Wall Mfg. Supply Co., P., Allegheny, Pa.

Oil Engines. [See Engines (Oil).]

Oil Separators.

Stewart Heater Co., Buffalo, N. Y.

Oil Well Machinery.

Keystone Steam Well Mach. Co., Beaver Falls, Pa.
Williams Bros., Ithaca, N. Y.

Ore Handling Machinery. [See Coal Handling Machinery.]

Ornamental Iron Works.

Bolles Iron & Wire Wks., J. E., Detroit, Mich.
Chesapeake Iron Works, Baltimore, Md.
Dow Wire & Iron Works, Louisville, Ky.
Ohio Elevator & Mach. Co., The, Columbus, O.
Scriber & Sons Co., The, Cincinnati, O.
Snead Architectural Iron Works, Louisville, Ky.
The Van Dorn Iron Works Co., Cleveland, Ohio.

Oxygen.

International Oxygen Co., New York, N. Y.

Oxygen Generators.

International Oxygen Co., New York, N. Y.

Oxy-Acetylene Welding and Cutting Outfit and Supplies.

International Oxygen Co., New York, N. Y.
Milburn Co., Alex. N., Baltimore, Md.

Packing. (Asbestos, Metallic, Rubber, Leather, etc.)

Goodyear Tire & Rubber Co., Akron, O.
Graton & Knight Mfg. Co., Worcester, Mass.
Jenkins Bros., New York, N. Y.
John-Manville Co., H. W., New York, N. Y.
Power Specialty Co., New York, N. Y.

Paint. (Metal Surfaces.)

Dixon Crucible Co., Joseph, Jersey City, N. J.

Paint. (Preservative.)

Reeves Co., The, New Orleans, La.

Paint. (Roofing, Building, etc.)

Cameron & Barkley Co., Charleston, S. C.
Chattanooga Paint Co., Chattanooga, Tenn.

Paper. (Roofing, Building, Sheeting, etc.)

Barrett Mfg. Co., Philadelphia, Pa.
Cameron & Barkley Co., Charleston, S. C.

Partitions. (Wooden Rolling.)

Van Harlingen, J. M., Atlanta, Ga.

Patent Attorneys.

Brown, Eugene C., Washington, D. C.
Chandise & Chandise, Washington, D. C.
Coleman, Watson E., Washington, D. C.
Evans & Co., Victor J., Washington, D. C.
Hodges, Vernon E., Washington, D. C.
Jenner, Herbert, Washington, D. C.
Lacey, R. S. & A. B., Washington, D. C.
McLundie, A. S., Chattanooga, Tenn.
Mills, Mansell F., Washington, D. C.
Moore, Edw. Bruce, Washington, D. C.
Parker, G. L., Washington, D. C.
Woodworth John R., Washington, D. C.

Pavement Filter.

Barrett Mfg. Co., Philadelphia, Pa.

Paving Blocks. (Creosoted.)

International Creosoting & Construction Co., Galveston, Tex.
National Lumber & Creosoting Co., Texarkana, Ark.
Republic Creosoting Co., Indianapolis, Ind.
Southern Creosoting Co., Ltd., Slidell, La.
Southern Paving Const. Co., Chattanooga, Tenn.
Southern Wood Preserving Co., Atlanta, Ga.
Wyckoff Pipe & Creosoting Co., Inc., The, New York, N. Y.

Paving Blocks. (Granite.)

Southern Marble & Granite Co., The, Spartansburg, S. C.

Paving Brick.

Carlyle Paving Brick Co., Portsmouth, O.
Copeland-Ingles Shale Brick Co., Birm'gh'm, Ala.
Dunn Wire-Cut-Log Brick Co., Conneaut, Ohio.
Southern Clay Mfg. Co., Chattanooga, Tenn.
Standard Brick Co., Macon, Ga.

Paving Plants. (Asphalt.)

Barber Asphalt Paving Co., Philadelphia, Pa.
Cummer & Son Co., F. D., Cleveland, Ohio.
Equitable Asphalt Maintenance Co., Kansas City, Mo.

Perforated Metal.

Caldwell & Son, H. W., Chicago, Ill.
Erdie Perforating Co., Rochester, N. Y.
Hendricks Mfg. Co., The, Carbondale, Pa.
Manhattan Perforated Metal Co., New York, N. Y.
Mundt & Sons, Charles, Jersey City, N. J.

Petroleum Refiners.

Gulf Refining Co., Pittsburgh, Pa.
Standard Oil Co., Inc., Newark, N. J.
Texas Co., The, Houston, Tex.

Phosphate Machinery.

American Process Co., New York, N. Y.
Bailey-Lebby Co., The, Charleston, S. C.
Cameron & Barkley Co., Charleston, S. C.
K-B Pulverizer Co., New York, N. Y.
Link-Belt Co., Philadelphia, Pa.
McLannahan-Stone Mach. Co., Hollidaysburg, Pa.
Raymond Impact Pulv. Co., Chicago, Ill.
Valk & Murdoch Iron Works, Charleston, S. C.

Pig Iron.

La Belle Iron Works, Steubenville, O.
Republic Iron & Steel Co., Youngstown, O.
Tennessee Coal, Iron & R. R. Co., B'm'gh'm, Ala.

Pile Drivers.

Vulcan Iron Works, Chicago, Ill.

Pile Driving and Wharf Building.

Murray & Co., Inc., W. D., Norfolk, Va.

Piling. (Creosoted.)

American Creosote Works, New Orleans, La.
Intern'l Creosoting & Const. Co., Galveston, Tex.
Southern Creosoting Co., Ltd., Slidell, La.
Southern Paving Const. Co., Chattanooga, Tenn.

Pilew Blocks.

Golden's Foundry & Machine Co., Columbus, Ga.
Medart Patent Pulley Co., St. Louis, Mo.

Pipe.

Allegheny Steel Co., Pittsburgh, Pa.
La Belle Iron Works, Steubenville, Ohio.
National Tube Co., Pittsburgh, Pa.
Youngstown Sheet & Tube Co., Youngstown, O.

Pipes. (Cast Iron.)

American Cast Iron Pipe Co., Birmingham, Ala.
American Pipe & Construction Co., Phila., Pa.
Clow & Sons, James B., Chicago, Ill.
Donaldson Iron Co., Emaus, Pa.
Giamorgan Pipe & Foundry Co., Lynchburg, Va.
Lynchburg Foundry Co., Lynchburg, Va.
Mason Iron & Steel Co., Mason, O.
U. S. Cast Iron Pipe & Fdry. Co., Burlington, N. J.
Wood & Co., R. D., Philadelphia, Pa.

Pipes. (Coil.)

Frick Co., The, Waynesboro, Pa.
National Pipe Bending Co., New Haven, Conn.
York Mfg. Co., York, Pa.

Pipes. (Corrugated Culvert.) [See Culvert (Corrugated Metal).]

Pipes. (Riveted.)

Keeler Co., E., Williamsport, Pa.

Pipes. (Second Hand.)

Eagle Pipe Supply Co., Inc., New York, N. Y.
Marine Metal & Supply Co., New York, N. Y.

Pipes. (Spiral Riveted.)

American Spiral Pipe Works, Chicago, Ill.

Pipes. (Spiral Steel.)

Standard Spiral Pipe Works, Chicago, Ill.

Pipes. (Sewer, Vitriol.) [See Sewer Pipe, Vitriol.]

Pipes. (Wood.)

Wyckoff & Son Co., A., Kimira, N. Y.

Pipes. (Wrought Iron.)

Youngstown Sheet & Tube Co., Youngstown, O.

Pipe Bends.

Pittsburgh Valve, Fdry. & Const. Co., Pittsburgh, Pa.

Pipe Covering. (Steam.)

Chesapeake Roofing & Pipe Covering Co., Inc., Baltimore, Md.
Southern Asbestos Mfg. Co., Inc., Richmond, Va.
Wyckoff & Son Co., A., Kimira, N. Y.

Pipe Cutting and Threading Machinery.

Saunders' Sons, D.,

- Pulleys. (Wood Split.)**
Caldwell & Son Co., H. W., Chicago, Ill.
Medart Patent Pulley Co., St. Louis, Mo.
Reeves Pulley Co., Columbus, Ind.
Salem Foundry & Machine Wks., Salem, Va.
- Pulleys, Shafting and Hangers.**
Caldwell & Son Co., H. W., Chicago, Ill.
Crescon-Morris Co., Philadelphia, Pa.
Erie Clutch & Pulley Co., Erie, Pa.
Golden's Foundry & Mach. Co., Columbus, Ga.
Jeffrey Mfg. Co., Columbus, O.
Jones & Laughlin Steel Co., Pittsburgh, Pa.
Link-Belt Co., Philadelphia, Pa.
Medart Patent Pulley Co., St. Louis, Mo.
Reeves Pulley Co., Columbus, Ind.
Wood's Sons Co., T. B., Chambersburg, Pa.
- Pulverizers.**
Austin Mfg. Co., Chicago, Ill.
Grundler Pat. Crusher & Pulv. Co., St. Louis, Missouri.
Jeffrey Mfg. Co., Columbus, O.
K-B Pulverizer Co., New York, N. Y.
McLanahan-Stone Mach. Co., Homestead, Pa.
Raymond Bros., Impact Pulv. Co., Chicago, Ill.
Stedman's Foundry & Machine Wks., Aurora, Ind.
Western Wheel Scraper Co., Aurora, Ill.
- Pumping Machinery.**
Affiliated Manufacturers Co., Milwaukee, Wis.
Alberger Pump & Condenser Co., New York, N. Y.
Cameron Steam Pump Wks., New York, N. Y.
Cook, A. D., Lawrenceburg, Ind.
Deane Steam Pump Plant, Holyoke, Mass.
Erie Pump & Equipment Co., Erie, Pa.
Emerson Pump & Valve Co., Alexandria, Va.
Holland Machine Co., New York, N. Y.
Keystone Pump & Well Engine Co., Beaver Falls, Pa.
Moffatt Machinery Mfg. Co., Charlotte, N. C.
Morris Machine Works, Baldwinville, N. Y.
Myers & Bros., F. E., Ashland, O.
Platt Iron Works Co., Dayton, Ohio.
Wood & Co., R. D., Philadelphia, Pa.
Worthington, Henry R., Harrison, N. J.
- Pumps. (Air.)**
Blakelee Mfg. Co., Du Quoin, Ill.
- Pumps. (Air Lift.)**
Sullivan Mchry. Co., Chicago, Ill.
- Pumps. (Boiler Feed.)**
Alberger Pump & Condenser Co., New York, N. Y.
Blakelee Mfg. Co., Du Quoin, Ill.
Cameron Steam Pump Wks., A. S., New York, N. Y.
Jeansville Iron Works Plant, Hazleton, Pa.
Moffatt Machinery Mfg. Co., Charlotte, N. C.
Murray Iron Works Co., Burlington, Ia.
Myers & Bros., F. E., Ashland, O.
- Pumps. (Centrifugal.)**
Alberger Pump & Condenser Co., New York, N. Y.
Buffalo Steam Pump Co., Buffalo, N. Y.
Cameron Steam Pump Wks., A. S., New York, N. Y.
Erie Pump & Equipment Co., Erie, Pa.
Holland Machine Co., New York, N. Y.
Keystone Pump & Well Engine Co., Beaver Falls, Pa.
Layne & Bowler Co., Houston, Tex.
- Pumps. (Dredging.)**
Buffalo Steam Pump Works, Buffalo, N. Y.
Erie Pump & Equipment Co., Erie, Pa.
Holland Machine Co., New York, N. Y.
Morris Machine Works, Baldwinville, N. Y.
Wood & Co., R. D., Philadelphia, Pa.
- Pumps. (Hydraulic.)**
Buffalo Steam Pump Co., Buffalo, N. Y.
Cameron Steam Pump Wks., A. S., New York, N. Y.
Jardwell Machine Co., Richmond, Va.
Trie Pump & Equipment Co., Erie, Pa.
French Oil Mill Mchry. Co., The Plains, O.
Holland Machine Co., New York, N. Y.
- Pumps. (Steam.)**
Alberger Pump & Condenser Co., New York, N. Y.
Blake & Knowles Steam Pump Works, East Cambridge, Mass.
Blakelee Mfg. Co., Du Quoin, Ill.
Buffalo Steam Pump Co., Buffalo, N. Y.
Cameron Steam Pump Wks., A. S., New York, N. Y.
Cameron & Barkley Co., Charleston, S. C.
Clayton Air Compressor Plant, Cambridge, Mass.
Cook, A. D., Lawrenceburg, Ind.
Deane Steam Pump Plant, Holyoke, Mass.
Emerson Pump & Valve Co., Alexandria, Va.
Fairbanks-Morse & Co., Atlanta, Ga.
Keystone Pump & Well Engine Co., Beaver Falls, Pa.
Murray Iron Works Co., Burlington, Ia.
Snow Steam Pump Plant, The New York, N. Y.
Worthington, Henry R., Harrison, N. J.
- Pumps. (Trench.)**
Affiliated Manufacturers Co., Milwaukee, Wis.
C. H. & E. Mfg. Co., Inc., Milwaukee, Wis.
- Pumps. (Turbine Driven.)**
Stortevant Co., B. F., Hyde Park, Boston, Mass.
- Pumps. (Vacuum.)**
Cameron Steam Pump Wks., A. S., New York, N. Y.
- Pumps. (Water works.)**
Holland Machine Co., New York, N. Y.
Platt Iron Works Co., Dayton, Ohio.
- Pump Leathers.**
Graton & Knight Mfg. Co., Worcester, Mass.
- Punching and Shearing Machinery.**
Bliss Co., E. W., Brooklyn, N. Y.
- Railroads. [See Industrial, Agricultural and Commercial Opportunities.]**
- Railroad Equipment and Supplies. (New and Second-hand.)**
American Frog & Switch Co., Hamilton, O.
Balle-Lebby Co., The, Charleston, S. C.
Birmingham Rail & Loco. Co., Birmingham, Ala.
Cincinnati Frog & Switch Co., Cincinnati, O.
Card, Geo. B., Cincinnati, O.
Fairbanks-Morse & Co., Atlanta, Ga.
Foster Co., L. B., Pittsburgh, Pa.
Georgia Car & Locomotive Co., Atlanta, Ga.
Hirsch Rolling Mill Co., St. Louis, Mo.
Hoffman & Co., Inc., R. O., Baltimore, Md.
Hyde, Chas., Pittsburgh, Pa.
Kilby Frog & Switch Co., Birmingham, Ala.
National Steel Rail Co., St. Louis, Mo.
Read Co., Howard W., Philadelphia, Pa.
Robinson & Orr, Pittsburgh, Pa.
Sherwood, E. C., New York, N. Y.
Southern Iron & Equipment Co., Atlanta, Ga.
Steel Rail Supply Co., The, New York, N. Y.
Thaw & Williams, Cincinnati, O.
United States Rail Co., Cumberland, Md.
Weir Frog Co., Cincinnati, O.
West Virginia Rail Co., Huntington, W. Va.
Wilson & Co., E. H., Philadelphia, Pa.
Wilson Mach. Co., St. Louis, Mo.
Zelicker Supply Co., Walter A., St. Louis, Mo.
- Railroad Frogs & Switches.**
American Frog & Switch Co., Hamilton, O.
Cincinnati Frog & Switch Co., Cincinnati, O.
Crescon & Barkley Co., Charleston, S. C.
Kilby Frog & Switch Co., Birmingham, Ala.
Robinson & Orr, Pittsburgh, Pa.
Sweet's Steel Co., Williamsport, Pa.
Weir Frog Co., Cincinnati, O.
- Rails. (Steel.)**
Carnegie Steel Co., Pittsburgh, Pa.
Foster Co., L. B., Pittsburgh, Pa.
Frank, J. E., Atlanta, Ga.
Gulf States Steel Co., Birmingham, Ala.
Hirsch Rolling Mill Co., St. Louis, Mo.
Hoffman & Co., Inc., R. O., Baltimore, Md.
Hyde, Chas., Pittsburgh, Pa.
Lackawanna Steel Co., Lackawanna, N. Y.
Lewis & Co., Henry, Philadelphia, Pa.
National Steel Rail Co., St. Louis, Mo.
Republic Iron & Steel Co., Youngstown, O.
Robinson & Orr, Pittsburgh, Pa.
Sherwood, E. C., New York, N. Y.
Southern Iron & Equipment Co., Atlanta, Ga.
Steel Rail Supply Co., The, New York, N. Y.
Sweet's Steel Co., Williamsport, Pa.
Tennessee Coal, Iron & R. R. Co., B'ham, Ala.
United States Rail Co., Cumberland, Md.
West Virginia Rail Co., Huntington, W. Va.
Wilson & Co., E. H., Philadelphia, Pa.
- Rail Braces, Crossings, etc. [See R. R. Frogs and Switches.]**
- Railings and Grilles. (Brass.)**
Newman Mfg. Co., Cincinnati, O.
- Railways. (Industrial.)**
Chase Fdry. & Mfg. Co., Columbus, O.
Cincinnati Frog & Switch Co., Cincinnati, O.
Hunt Co., Inc., O. W., West New Brighton, N. Y.
Link-Belt Co., Philadelphia, Pa.
- Rams. (Hydraulic.) [See Hydraulic Ram.]**
- Reamers.**
Morris Twist Drill & Mch. Co., New Bedford, Mass.
- Reeds.**
American Supply Co., Providence, R. I.
- Refrigerating Machinery and Apparatus.**
Huetteman & Cramer Co., The, Detroit, Mich.
Fortmouth Engine Co., Fortmouth, O.
Remington Machine Co., Wilmington, Del.
Viller Mfg. Co., Milwaukee, Wis.
Vogt Machine Co., Henry, Louisville, Ky.
York Mfg. Co., York, Pa.
- Reinforcing Bars. [See Concrete Reinforcing Bars.]**
- River and Harbor Improvements. (Dredges, Dock, Wharves, etc.)**
Globe Dredging Co., Savannah, Ga.
- Road Expansion Joints.**
Philip Carey Co., The, Cincinnati, Ohio.
- Road and Street Machinery.**
Austin-Western Road Mchry. Co., The, Chicago, Ill.
Buffalo Steam Roller Co., Buffalo, N. Y.
Equitable Asphalt Maintenance Co., Kansas City, Mo.
Erie Machine Shops, Erie, Pa.
Gallon Iron Works & Mfg. Co., The, Gallon, Ohio.
Holt Manufacturing Co., Inc., The, Peoria, Ill.
Kelly Springfield Road Roller Co., Springfield, O.
Kilbourne & Jacoby Mfg. Co., Columbus, Ohio.
Russell Grader Mfg. Co., Minneapolis, Minn.
Thew Automatic Shovel Co., Lorain, Ohio.
Universal Road Mchry. Co., Kingston, N. Y.
Western Wheel Scraper Co., Aurora, Ill.
- Road and Street Materials.**
Barber Asphalt Paving Co., Philadelphia, Pa.
Barrett Mfg. Co., Philadelphia, Pa.
Rocmac Road Corp. of America, Cleveland, Ohio.
Semet-Solvay Co., Solvay, N. Y.
Standard Oil Co., Inc., Newark, N. J.
Texas Co., The, Houston, Tex.
U. S. Asphalt Refining Co., New York, N. Y.
- Road Binders.**
Barber Asphalt Paving Co., Philadelphia, Pa.
Barrett Mfg. Co., Philadelphia, Pa.
Semet-Solvay Co., Solvay, N. Y.
Standard Oil Co., Newark, N. J.
U. S. Asphalt Refining Co., New York, N. Y.
- Road Roller. (Steam.)**
Austin-Western Road Mchry. Co., The, Chicago, Ill.
Barber Asphalt Paving Co., Philadelphia, Pa.
Buffalo Steam Roller Co., Buffalo, N. Y.
Erie Machine Shops, Erie, Pa.
Kelly Springfield Road Roller Co., Springfield, O.
Universal Road Mchry. Co., Kingston, N. Y.
- Road Oil.**
Gulf Refining Co., Pittsburgh, Pa.
Standard Oil Co., Inc., Newark, N. J.
Texas Co., The, Houston, Tex.
U. S. Asphalt Refining Co., New York, N. Y.
- Road Preservatives.**
Barrett Mfg. Co., Philadelphia, Pa.
Gulf Refining Co., Pittsburgh, Pa.
Semet-Solvay Co., Solvay, N. Y.
Standard Oil Co., Inc., Newark, N. J.
Texas Co., The, Houston, Tex.
U. S. Asphalt Refining Co., New York, N. Y.
- Road Scarifiers.**
Buffalo Steam Roller Co., Buffalo, N. Y.
Gallon Iron Works & Mfg. Co., The, Gallon, Ohio
- Rock Crushers. [See Crushers, Rock.]**
- Rollers. (For Moving Houses, Machinery, Etc.)**
Ogden, O. O., Baton Rouge, La.
- Roller Covering Supplies.**
American Supply Co., Providence, R. I.
- Roofing. (Cement Tile)**
American Cement Tile Mfg. Co., Pittsburgh, Pa.
- Roofing. (Ready Prepared: Felt, Tar, Asbestos, Asphalt.)**
American Sheet & Tin Plate Co., Pittsburgh, Pa.
Asbestos Protected Metal Co., Pittsburgh, Pa.
Barrett Mfg. Co., Philadelphia, Pa.
Cameron & Barkley Co., Charleston, S. C.
Cheesapeake Roofing & Pipe Covering Co., Inc., Baltimore, Md.
Johns-Manville Co., H. W., New York, N. Y.
- Roofing. (Metal Shingles.) [See Shingles, Metal.]**
Bristol Metal Mfg. Co., Bristol, Va.-Tenn.
Cortright Metal Roofing Co., Philadelphia, Pa.
Edwards Mfg. Co., The, Cincinnati, O.
Hyndman Roofing Co., Cincinnati, O.
Southern Sheet & Tin Plate Co., Ashland, Ky.
- Roofing. (Slate.)**
East Bangor Consol. Slate Co., East Bangor, Pa.
Genuine Bangor Slate Co., Easton, Pa.
Johnson, E. J., New York, N. Y.
Standard Slate Corp., Easton, Va.
- Roofing and Siding. (Metal.)**
American Sheet & Tin Plate Co., Pittsburgh, Pa.
Asbestos Protected Metal Co., Pittsburgh, Pa.
Cameron & Barkley Co., Charleston, S. C.
Cortright Metal Roofing Co., Philadelphia, Pa.
Edwards Mfg. Co., The, Cincinnati, O.
Southern Sheet & Tin Plate Co., Ashland, Ky.
Steel Products Co., The, Savannah, Ga.
Tennessee Metal Culvert Co., Nashville, Tenn.
Whitaker-Glessner Co., Portsmouth Works, Portsmouth, Ohio.
Youngstown Sheet & Tube Co., Youngstown, O.
- Rope. (Manila, Sisal, Hemp, etc.)**
Broderick & Bascom Rope Co., St. Louis, Mo.
Columbian Rope Co., Auburn, N. Y.
Waterbury Co., New York, N. Y.
Wood's Sons Co., T. B., Chambersburg, Pa.
- Rope. (Wire.) [See Wire Rope.]**
American Steel & Wire Co., Chicago, Ill.
Broderick & Bascom Rope Co., St. Louis, Mo.
Hunt Co., Inc., C. W., West New Brighton, N. Y.
Robinson's Sons Co., John A., Trenton, N. J.
Waterbury Co., New York, N. Y.
Youngstown Sheet & Tube Co., Youngstown, O.
- Rope Drives.**
Caldwell & Son, H. W., Chicago, Ill.
Crescon-Morris Co., Philadelphia, Pa.
Jones & Laughlin Steel Co., Pittsburgh, Pa.
Medart Patent Pulley Co., St. Louis, Mo.
Waterbury Co., New York, N. Y.
Wood's Sons Co., T. B., Chambersburg, Pa.
- Rubber Goods.**
Eureka Fire Hose Mfg. Co., New York, N. Y.
Goodyear Tire & Rubber Co., Akron, O.
- Rules. (Steel.)**
Lufkin Rule Co., Saginaw, Mich.
Starrett Co., L. S., Athol, Mass.
- Saddles. (For Cotton Mchry.) [Oilless.]**
Graphite Lubricating Co., Bound Brook, N. J.
- Safes and Vaults.**
York Safe & Lock Co., York, Pa.
- Sand.**
Arundel Sand & Gravel Co., Baltimore, Md.
Kirkpatrick Sand & Cement Co., Birmingham, Ala.
- Sand. (Foundry.)**
Newport Sand Bank Co., Inc., Newport, Ky.
- Sand Dryers.**
American Process Co., New York, N. Y.
Ripley Foundry & Mach. Co., The, Ripley, Ohio.
- Sap Stain Preventive.**
Church & Dwight Co., New York, N. Y.
- Sash Chain.**
Niagara Falls Metal Stamping Works, Niagara Falls, N. Y.
- Saws.**
Gerlach Co., Peter, Cleveland, O.
Huther Bros. Saw Mfg. Co., Inc., Rochester, N. Y.
- Saws. (Hack.)**
Starrett Co., L. S., Athol, Mass.
- Saw Rigs. (Portable.)**
C. H. & E. Mfg. Co., Inc., Milwaukee, Wis.
- Sawmill Dogs.**
Soule Steam Feed Works, Meridian, Miss.
- Sawmills.**
Gainesville Iron Works, Gainesville, Ga.
- Sawmill Machinery.**
Bailey-Lebby Co., Charleston, S. C.
Cameron & Barkley Co., Charleston, S. C.
McKenzie Iron Works, Charlotte, N. C.
Schofield Iron Works, Macon, Ga.
Southern Engine & Boiler Wks., Jackson, Tenn.
- Saw Sharpeners.**
Carborundum Co., Niagara Falls, N. Y.
Vitrified Wheel Co., Westfield, Mass.
- Saw Sharpeners and Files. (Cotton Gin.)**
Carver Cotton Gin Co., East Bridgewater, Mass.
- Scales.**
Standard Scale & Supply Co., Pittsburgh, Pa.
- Screens. (Fly, Window and Door.)**
New Jersey Wire Cloth Co., Trenton, N. J.
- Screens. (Mining, Stone, etc.)**
Erdie Perforating Co., Rochester, N. Y.
Hendrick Mfg. Co., Carbondale, Pa.
Jeffrey Mfg. Co., Columbus, O.
McLanahan-Stone Mach. Co., Hollidaysburg, Pa.
Mandi & Sons, Charles, Jersey City, N. J.
New Jersey Wire Cloth Co., Trenton, N. J.
- Screenings. (For Concrete and Road Construction.)**
American Ballast Co., Knoxville, Tenn.
- Screws. (Machine.)**
Progressive Mfg. Co., Torrington, Conn.
- Screws. (Safety Set.)**
Allen Manufacturing Co., Inc., Hartford, Conn.
- Screw Machine Products.**
Progressive Mfg. Co., Torrington, Conn.
- Separators. (Dust.)**
Buffalo Forge Co., Buffalo, N. Y.
Raymond Bros. Impact Pulv. Co., Chicago, Ill.
- Sewer Flushing Siphons.**
Pacific Flush Tank Co., New York, N. Y.
- Sewer Joint Compounds.**
Pacific Flush Tank Co., New York, N. Y.
- Sewer Pipes. (Vitrified.)**
Bannon Pipe Co., F., Louisville, Ky.
Blackmer & Post Pipe Co., St. Louis, Mo.
Cannell Sewer Pipe Co., Cannelton, Ind.
Owensboro Sewer Pipe Co., Owensboro, Ky.
Pomona Terra-Cotta Co., Pomona, N. C.
Southern Sewer Pipe Co., Birmingham, Ala.
Stevens Sons Co., H., Macon, Ga.
- Sewer Pipe and Drains. (Monolithic Concrete)**
Requarth Co., O. W., Charlotte, N. C.
- Sewage Pumping and Disposal Apparatus.**
Pacific Flush Tank Co., New York, N. Y.
- Shafting. (Cold Rolled Steel.)**
American Steel & Wire Co., Chicago, Ill.
- Shafting. (Polished Steel.)**
Jones & Laughlin Steel Co., Pittsburgh, Pa.
Medart Patent Pulley Co., St. Louis, Mo.
Pardee Works, O., Perth Amboy, N. J.
Republic Iron & Steel Co., Youngstown, O.
Union Drawn Steel Co., Beaver Falls, Pa.
- Shafting. [See Pulleys, Shafting and Hangers.]**
- Sharpening Stones.**
Carborundum Co., Niagara Falls, N. Y.
Vitrified Wheel Co., Westfield, Mass.
- Shearing Machinery.**
Erie Foundry Co., Erie, Pa.
- Sheet, Brass and Copper.**
McKenna Bros. Brass Co., Pittsburgh, Pa.
- Sheet Metal Work.**
Atlas Metal Works, Dallas, Tex.
Dixie Culvert & Metal Co., Atlanta, Ga.
Fouts Co., C. C., Middletown, O.
Lone Star Culvert Co., Houston, Tex.
Niagara Falls Metal Stamping Works, Niagara Falls, N. Y.
Salisbury Metal Culvert Co., Salisbury, N. C.
South Atlantic Blow Pipe & Sheet Metal Co., Savannah, Ga.
Steel Products Co., The, Savannah, Ga.
Tennessee Metal Culvert Co., Nashville, Tenn.
Virginia Metal & Culvert Co., Roanoke, Va.
- Sheet Metal Working Machinery.**
Bliss Co., E. W., Brooklyn, N. Y.
Eagle Mfg. Co., Cincinnati, Ohio.
- Sheet Steel and Iron.**
American Sheet & Tin Plate Co., Pittsburgh, Pa.
Cincinnati Iron & Steel Co., Cincinnati, O.
La Belle Iron Works, Steubenville, O.
Republic Iron & Steel Co., Youngstown, O.
Southern Sheet & Tin Plate Co., Ashland, Ky.
Tennessee Coal, Iron & R. R. Co., B'ham, Ala.
Whitaker-Glessner Co., Portsmouth Works, Portsmouth, Ohio.
Wood Iron & Steel Co., Alan, Philadelphia, Pa.
Youngstown Sheet & Tube Co., Youngstown, O.
- Shelving. [(Steel) Vault, Store, Etc.]**
Van Hurlingen, J. M., Atlanta, Ga.
- Shingles. (Metal.)**
Bristol Metal Mfg. Co., Bristol, Va.-Tenn.
Cortright Metal Roofing Co., Philadelphia, Pa.
Edwards Mfg. Co., The, Cincinnati, O.
Hyndman Roofing Co., Cincinnati, O.
Southern Sheet & Tin Plate Co., Ashland, Ky.
- Shop Furniture. (Steel.)**
Merritt & Co., Camden, N. J.
- Shovels. (Special for Any Purpose.)**
Connaut Shovel Co., The, Connaut, Ohio.
- Shovels. (Steel, Brass, Aluminum, etc.)**
Connaut Shovel Co., The, Connaut, Ohio.
- Shutters. (Iron.)**
Bolles Iron & Wire Works, J. E., Detroit, Mich.
Cheesapeake Iron Works, Baltimore, Md.
- Shutters. (Steel Rolling.)**
Kinneair Mfg. Co., Columbus, O.
- Shutters. (Tin Clad.)**
Victor Mfg. Co., Newburyport, Mass.
- Silos. (Metal.)**
Canton Culvert & Silo Co., Canton, O.
Dixie Culvert & Metal Co., Atlanta, Ga.
Fouts Co., C. C., Middletown, O.
Lone Star Culvert Co., Houston, Tex.
Tennessee Metal Culvert Co., Nashville, Tenn.
Virginia Metal & Culvert Co., Roanoke, Va.
- Skewers and Dowels. (Oiled.)**
Graphite Lubricating Co., Bound Brook, N. J.
- Slate. (Roofing, Sanitary, Structural, etc.)**
East Bangor Consol. Slate Co., East Bangor, Pa.
Genuine Bangor Slate Co., Easton, Pa.
Johnson, E. J., New York, N. Y.
Standard Slate Corp., Easton, Va.
- Sluice Gates and Appliances.**
Goldwell-Wilcox Co., Newburgh, N. Y.
- Smokestacks. (Iron and Steel.)**
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.
Des Moines Bridge & Iron Co., Des Moines, Ia.
Keeler Co., E., Williamsport, Pa.
Lombard Iron Works, Augusta, Ga.
Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.
Schofield Iron Works, Macon, Ga.
Virginia Bridge & Iron Co., Roanoke, Va.
- Soda. (Bicarbonate.)**
Church & Dwight Co., New York, N. Y.
- Speed Changes. (Variable.)**
Moore & White Co., The, Philadelphia, Pa.
Reeves Pulley Co., Columbus, Ind.
- Speed Reducing Transmissions.**
James Mfg. Co., D. O., Chicago, Ill.
- Spikes. (Railroad.)**
Hoffman & Co., Inc., R. O., Baltimore, Md.
- Spikes. [See Nails and Spikes.]**
- Springs. (Machinery, Railway, Spiral.)**
Cory Spring Works, New York, N. Y.
Raymond Mfg. Co., Ltd., Corry, Pa.
- Stamp Mills.**
Mecklenburg Iron Works, Charlotte, N. C.
- Stamps. (Brass, Rubber.)**
Baltimore Office Supply Co., Baltimore, Md.
Dorman Co., J. F. W., Baltimore, Md.
- Standpipes.**
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.
- Chicago Bridge & Iron Works, Chicago, Ill.**
Des Moines Bridge & Iron Co., Des Moines, Ia.
Hartley Boiler Works, Montgomery, Ala.
Keeler Co., E., Williamsport, Pa.
Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.
Struthers-Wells Co., Warren, Pa.
- Stapling Machinery. (Fruit Package, Etc.)**
Saranac Machine Co., Benton Harbor, Mich.
- Stationers. (Envelopes, Letter and Bill Book, etc.)**
Young & Selden Co., Baltimore, Md.
- Steam Feeds.**
Soule Steam Feed Works, Meridian, Miss.
- Steam Fitters' Supplies.**
Saunders' Sons, D., Inc., Yonkers.
- Steam Heating.**
Keeler Co., E., Williamsport, Pa.
- Steamship Lines. (Coastwise.)**
Baltimore Steam Packet Co., Baltimore, Md.
Cheesapeake Steamship Co., Baltimore, Md.
Detroit & Cleveland Navigation Co., Detroit, Mich.
Merchants & Miners' Trans. Co., Baltimore, Md.
- Steamship Lines. (Trans Atlantic.)**
Onard Steamship Co., Ltd., New York, N. Y.
- Steam Hammers.**
Erie Foundry Co., Erie, Pa.
- Steam Shovel Chains.**
Walmer Chain & Iron Co., Lebanon, Pa.
- Steam Shovels.**
American Gray Machinery Co., The, Bucyrus, Ohio.
Fairbanks Steam Shovel Co., Marion, O.
Marion Steam Shovel Co., Marion, Ohio.
Sherwood, E. C., New York, N. Y.
Thaw & Williams, Cincinnati, O.
Thew Automatic Shovel Co., Lorain, Ohio.
- Steam Specialties.**
Lunkenshimer Co., The, Cincinnati, Ohio.
Powell Co., Wm., Cincinnati, O.

Steam Traps.

Jacklin Bros., New York, N. Y.

Steel.

Carnegie Steel Co., Pittsburgh, Pa.
 Carnegie Bros., Baltimore, Md.
 Gulf States Steel Co., Birmingham, Ala.
 Hoffman & Co., Inc., R. O., Baltimore, Md.
 Jones & Laughlin Steel Co., Pittsburgh, Pa.
 Jones & Laughlin Steel Co., Steubenville, O.
 La Belle Iron Works, Lackawanna, N. Y.
 Republic Iron & Steel Co., Youngstown, O.
 Tennessee Coal, Iron & R. R. Co., Birmingham, Ala.
 Union Drawn Steel Co., Beaver Falls, Pa.
 Union Nat. Co., The Cleveland, O.
 Whittaker-Gieseler Co., Portsmouth Works, Portsmouth, Ohio.
 Wood Iron & Steel Co., Alan, Philadelphia, Pa.
 Youngstown Sheet & Tube Co., The Youngstown, O.

Steel (Tool).

Bourne-Fuller Co., The, Cleveland, Ohio.
 McKenna Bros., Brass Co., Pittsburgh, Pa.
 Union Drawn Steel Co., Beaver Falls, Pa.

Steel (Vanadium).

Carnegie Steel Co., Pittsburgh, Pa.
 Union Drawn Steel Co., Beaver Falls, Pa.

Steel Buildings. (Designers, Builders.)

Amer. Bridge Co., of New York, N. Y.
 Belmont Iron Works, Philadelphia, Pa.
 Case Crane & Engineering Co., Columbus, Ohio.
 Champion Bridge Co., Wilmington, O.
 Chesapeake Iron Works, Baltimore, Md.
 Des Moines Bridge & Iron Co., Des Moines, Ia.
 Phoenix Iron Co., Philadelphia, Pa.
 Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.
 Richmond Structural Steel Co., Richmond, Va.
 Schreiber & Sons Co., The L., Cincinnati, O.
 Sead Architectural Iron Wks., Louisville, Ky.
 Turner, O. A. P., Minneapolis, Minn.
 Virginia Bridge & Iron Co., Roanoke, Va.

Steel Castings.

Graciele Steel Castings Co., Lansdowne, Pa.
 Hoffman & Co., Inc., R. O., Baltimore, Md.
 Riverside Steel Casting Co., Newark, N. J.

Steel Plate Work.

Cassey-Hedges Co., Chattanooga, Tenn.
 Chattanooga Boiler & Tank Co., Chattanooga, Tenn.
 Chattanooga Boiler Works, Chattanooga, Tenn.
 Hoffman & Co., Inc., R. O., Baltimore, Md.
 Memphis Steel Construction Co., Memphis, Tenn.
 Phoenix Iron Co., Philadelphia, Pa.
 Shubert-Wells Co., Warren, Pa.

Steel Protector. (Concrete Curb, Steps, etc.)

[See Curb Protector Steel.]

Steel Sheet Piling.

Carnegie Steel Co., Pittsburgh, Pa.
 Franks, J. E., Atlanta, Ga.
 Jones & Laughlin Steel Co., Pittsburgh, Pa.
 Lackawanna Steel Co., Lackawanna, N. Y.

Stencils.

Baltimore Office Supply Co., Baltimore, Md.
 Dorman Co., J. F. W., Baltimore, Md.

Stirrups. (Building.)

Chesapeake Iron Works, Baltimore, Md.

Stock Certificates, Bonds and Seals.

Baltimore Office Supply Co., Baltimore, Md.
 Dorman Co., J. F. W., Baltimore, Md.

Stokers. (Hand.)

Reber Grate Bar & Stoking Co., Baltimore, Md.

Stokers. (Mechanical.)

Babcock & Wilcox Co., New York, N. Y.
 Westinghouse Machine Co., Pittsburgh, Pa.

Stone. (Building.)

Atlantic Stone Co., Atlanta, Ga.
 Bedford Steam Stone Works, Bedford, Ind.
 Kirkpatrick Sand & Cement Co., Birmingham, Ala.

Stone. (Crushed.)

[See Crushed Stone.]

Stone and Gravel Plants.

Weller Mfg. Co., Chicago, Ill.

Storage Batteries.

Exc. Storage Battery Co., The, Philadelphia, Pa.
 Westinghouse Machine Co., The, Pittsburgh, Pa.

Strapping Leather.

Graton & Knight Mfg. Co., Worcester, Mass.

Structural Steel and Iron.

Allegheny Steel Co., Pittsburgh, Pa.
 Amer. Bridge Co., of New York, N. Y.
 Belmont Iron Works, Philadelphia, Pa.
 Bourne-Fuller Co., The, Cleveland, Ohio
 Carnegie Steel Co., Pittsburgh, Pa.
 Case Crane & Engineering Co., Columbus, Ohio.
 Champion Bridge Co., Wilmington, O.
 Chesapeake Iron Works, Baltimore, Md.
 Chicago Bridge & Iron Works, Chicago, Ill.
 Cincinnati Iron & Steel Co., Cincinnati, O.
 Des Moines Bridge & Iron Co., Des Moines, Ia.
 Dietrich Bros., Baltimore, Md.
 East St. Louis Bridge Co., East St. Louis, Ill.
 Granger & Co., Inc., Louisville, Ky.
 Hoffman & Co., Inc., R. O., Baltimore, Md.
 Jones & Laughlin Steel Co., Pittsburgh, Pa.
 Lackawanna Steel Co., Lackawanna, N. Y.
 Memphis Steel Construction Co., Memphis, Tenn.
 Phoenix Iron Co., Philadelphia, Pa.
 Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.
 Republic Iron & Steel Co., Youngstown, O.
 Richmond Structural Steel Co., Richmond, Va.
 Seale & Sons Co., Wm. B., Pittsburgh, Pa.
 Schreiber & Sons Co., The L., Cincinnati, O.
 Sead Architectural Iron Works, Louisville, Ky.
 Southern Steel & Tin Plate Co., Ashland, Ky.
 Steel Products Co., The, Savannah, Ga.
 Tennessee Coal, Iron & R. R. Co., Birmingham, Ala.
 The Van Dorn Iron Works Co., Cleveland, Ohio.
 Vincennes Bridge Co., Vincennes, Ind.
 Virginia Bridge & Iron Co., Roanoke, Va.

Stump Pullers.

Zimmerman Steel Co., Lone Tree, Iowa.

Sulphur.

Union Sulphur Co., New York, N. Y.

Super-Heaters. (Steam.)

Babcock & Wilcox Co., New York, N. Y.
 Power Specialty Co., New York, N. Y.

Surveying Instruments.

Waber & Co., F., Philadelphia, Pa.

Swinging Engines.

Duke Engine Co., Grand Haven, Mich.

Switchboards, Switches, etc.

General Electric Co., Schenectady, N. Y.

Switches. [See Railroad Frogs and Switches.]**Switchstands.**

Weir Frog Co., Cincinnati, O.

Tackle Blocks. (For Wire or Manila Rope.)

Broderick & Bascom Rope Co., St. Louis, Mo.

Talc and Soapstone Powders.

Georgia Talc Co., Ashville, N. C.

Tanks. (Iron and Steel.)

American Bridge Co., New York, N. Y.
 American Water Softener Co., Philadelphia, Pa.
 Caldwell Co., Inc., W. E., Louisville, Ky.
 Cassey-Hedges Co., Chattanooga, Tenn.
 Chattanooga Boiler & Tank Co., Chattanooga, Tenn.
 Chicago Bridge & Iron Works, Chicago, Ill.
 Cincinnati Boiler Works, Cincinnati, Pa.
 Cole Mfg. Co., R. D., Newnan, Ga.
 Des Moines Bridge & Iron Co., Des Moines, Ia.
 Dixie Culvert & Metal Co., Atlanta, Ga.
 Hartley Boiler Works, Montgomery, Ala.
 Hendricks Mfg. Co., Carbondale, Pa.
 Keeler Co., E., Williamsport, Pa.
 Lombard Iron Works, Augusta, Ga.
 Lookout Boiler & Mfg. Co., Chattanooga, Tenn.
 Memphis Steel Construction Co., Memphis, Tenn.
 Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.
 Schofield Iron Works, Macon, Ga.
 Southern Boiler & Tank Works, Memphis, Tenn.
 Struthers-Wells Co., Warren, Pa.
 Tennessee Metal Culvert Co., Nashville, Tenn.
 Twin City Boiler Works, Bristol, Va.-Tenn.
 Virginia Bridge & Iron Co., Roanoke, Va.
 Walsh & Weidner Boiler Co., Chattanooga, Tenn.

Tanks. (Wood.)

Caldwell Co., Inc., W. E., Louisville, Ky.
 Davis & Son, G. M., Palatka, Fla.

Tapes. (Measuring.)

Lufkin Rule Co., of New York, N. Y.
 Starrett Co., L. S., Athol, Mass.

Telephones. (Supplies, Equipment.)

Piedmont Electric Co., Asheville, N. C.
 Western Electric Co., New York, N. Y.

Telephone Service.

American Telephone & Telegraph Co.

Terra-Cotta. (Ornamental.)

Atlanta Terra-Cotta Co., Atlanta, Ga.
 Pomona Terra-Cotta Co., Pomona, N. C.
 Southern Building Material Co., Norfolk, Va.
 Stevens' Sons Co., H., Macon, Ga.

Threshers.

Cardwall Machine Co., Richmond, Va.

Tiering Machines. (Portable.)

Economy Engineering Co., Chicago, Ill.

Tile (Drain)

Oconee Brick & Tile Co., Milledgeville, Ga.

Tile (Interior)

Amer. Enam. Brick & Tile Co., New York, N. Y.

Important Information For Advertisers in Manufacturers Record

Publication day—Every Thursday.

Advertising copy not requiring proof must reach us one week in advance of publication day.

When proof is required, two weeks in advance.

Width of column, 2½ inches; length, 13 inches.

Four columns to page.

TYPOGRAPHICAL ARRANGEMENT

We desire to use, as far as possible, uniform display type and borders and avoid the use of black background cuts. The uniform border is two-point plain rule for all spaces less than a full page.

Copy for advertisements other than those to be used in special departments should be prepared for two-column measure for spaces less than a quarter page; for a quarter page or larger, in two or four columns.

Tile. (Mantel and Promenade.)

Hood Brick Co., B. Mifflin, Atlanta, Ga.

Tile (Structural)

Oconee Brick & Tile Co., Milledgeville, Ga.

Timbers. (Oreocuted.)

American Oreocute Works, New Orleans, La.
 Republic Oreocute Co., Indianapolis, Ind.

Tin and Terne Plates.

American Sheet & Tin Plate Co., Pittsburgh, Pa.

Tobacco Machinery.

Buckeye Iron & Brass Works, Dayton, O.
 Cardwell Machine Co., Richmond, Va.
 Grote Mfg. Co., F., Evansville, Ind.

Tools. (Machinists')

Holland Mfg. Co., Erie, Pa.
 Morse Twist Drill & Mch. Co., New Bedford, Mass.

Tools. (Mechanical.)

Starrett Co., L. S., Athol, Mass.

Tools. Pneumatic.

Chicago Pneumatic Tool Co., Chicago, Ill.

Torches.

Wall Mfg. Supply Co., F., Allegheny, Pa.

Towers. (Electric Transmission.)

American Bridge Co., of New York, N. Y.
 Scaife & Sons Co., Wm. B., Pittsburgh, Pa.

Towers. (Steel and Wood.)

Caldwell & Co., Inc., W. E., Louisville, Ky.
 Chattanooga Boiler & Tank Co., Chattanooga, Tenn.
 Chicago Bridge & Iron Works, Chicago, Ill.
 Cole Mfg. Co., R. D., Newnan, Ga.
 Des Moines Bridge & Iron Co., Des Moines, Ia.
 Memphis Steel Const. Co., Memphis, Tenn.
 Pittsburgh-Des Moines Steel Co., Pittsburgh, Pa.

Track Material. (Steam & Industrial Railroads.)

Conley Frog & Switch Co., Memphis, Tenn.
 Upon Nut Co., Cleveland, O.

Traction Engines.

Fairbanks-Morse & Co., Atlanta, Ga.
 Holt Mfg. Co., Inc., The, Peoria, Ill.

Tramway. (Overhead.)

Amburn Co. (Tramway Department), New York, N. Y.
 Spidel, J. G., Reading, Pa.

Tramways. (Portable.)

Amburn Co. (Tramway Department), New York, N. Y.

Tramway. (Wire Rope.)

Amburn Co. (Tramway Department), New York, N. Y.
 American Steel & Wire Co., Chicago, Ill.
 Broderick & Bascom Rope Co., St. Louis, Mo.
 Caldwell & Sons Co., H. W., Chicago, Ill.
 Link-Belt Co., Philadelphia, Pa.
 Waterbury Co., New York, N. Y.

Transformers.

Triumph Electric Co., Cincinnati, O.

Trench Excavator. [See Excavator (Trench).]**Trucks. (Dry Kiln.)**

Moore Dry Kiln Co., L., Jacksonville, Fla.

Trucks. (Platform, Freight, Mill, Factory, etc.)

Chase Fdry. & Mfg. Co., Columbus, O.

Trucks. (Storage Battery Auto.)

Westinghouse Machine Co., Pittsburgh, Pa.

Trust Companies. [See Bankers and Brokers.]**Tubes. (Boiler.)**

Allegheny Steel Co., Pittsburgh, Pa.
 Cincinnati Iron & Steel Co., Cincinnati, O.

Tube Well Strainers.

Cook, A. D., Lawrenceburg, Ind.

Tubing.

La Belle Iron Works, Steubenville, O.
 Youngstown Sheet & Tube Co., Youngstown, O.

Turbines. (Hydraulic.)

Allis-Chalmers Mfg. Co., Milwaukee, Wis.
 Davis Foundry & Machine Wks., Rome, Ga.
 Leffel & Co., James, Springfield, O.
 Salem Foundry & Machine Wks., Salem, Va.
 Smith Co., S. Morgan, York, Pa.

Turbines. (Steam.)

Allis-Chalmers Mfg. Co., Milwaukee, Wis.
 General Electric Co., Schenectady, N. Y.
 Sturtevant Co., R. F., Hyde Park, Boston, Mass.
 Terry Steam Turbine Co., Hartford, Conn.
 Western Electric Co., New York, N. Y.
 Westinghouse Machine Co., Pittsburgh, Pa.

Wagon Unloaders.

Bonney Supply Co., Rochester, N. Y.

Wall Coping.

Southern Sewer Pipe Co., Birmingham, Ala.

Wall Plugs. (Galvanized.)

Niagara Falls Metal Stamping Works, Niagara Falls, N. Y.

The Van Dorn Iron Works Co., Cleveland, Ohio.

Wall Ties.

Niagara Falls Metal Stamping Works, Niagara Falls, N. Y.

Washers. (Graphite and Bronze, Oilless.)

Graphite Lubricating Co., Round Brook, N. J.

Washers. (Ore and Phosphate.)

Bailey-Lobby Co., Charleston, S. C.

Cameron & Barker Co., Charleston, S. C.

McLennan-Stone Mach. Co., Hollidaysburg, Pa.

Washers and Rivets. [See Bolts, Nuts, Rivets, Studs and Washers.]**Watchman's Clocks.**

Watchman's Clock & Supply Co., New York, N. Y.

Water Filters. [See Filters, Water, etc.]

Waterproofing. (For Brick, Concrete, Granite, etc.)

Aqua-Bar Co., The, Philadelphia, Pa.

Barrett Mfg. Co., Philadelphia, Pa.

Johns-Manville Co., H. W., New York, N. Y.

Water-Softening Apparatus. (Purifying.)

American Water Softener Co., Philadelphia, Pa.

International Filter Co., Chicago, Ill.

N. Y. Const. Jewell Filtr'n Co., New York, N. Y.

Tucker & Laxon, Charlotte, N. C.

Water-Wheels. [See Turbines. (Hydraulic.)]**Water-Works Supplies and Appliances.**

Allen-Scales Engineering Co., Inc., Nashville, Tenn.

American Cast Iron Pipe Co., Birmingham, Ala.

American Pipe & Constr. Co., Philadelphia, Pa.

Bourbon Copper & Brass Wks. Co., Cincinnati, O.

Clark Co., H. W., Mattoon, Ill.

Clow & Sons, James R., Chicago, Ill.

Coldwell-Wilcox Co., Newburgh, N. Y.

Columbian Iron Works, Chattanooga, Tenn.

Donaldson Iron Co., Emsus, Pa.

Giamorgan Pipe & Foundry Co., Lynchburg, Va.

Keystone Pump & Well Engine Co., Beaver Falls, Pa.

Layne & Bowler Co., Houston, Tex.

Mason Iron & Steel Co., Massillon, Ohio.

Pomona Terra-Cotta Co., Pomona, N. C.

Salem Fdry. & Machine Works, Salem, Va.

Standard Spiral Pipe Works, Chicago, Ill.

Stevens' Sons Co., H., Macon, Ga.

U. S. Cast Iron Pipe & Fdry. Co., Burlington, N. J.

Wood & Co., R. D., Philadelphia, Pa.

Welding. (Oxy-Acetylene Process.)

Frost-O-Lite Co., Inc., The, Indianapolis, Ind.

Welding Plants. (Oxy-Acetylene.)

Milburn Co., Alex. N., Baltimore, Md.

Welding Apparatus. (Oxy-Acetylene Process.)

Frost-O-Lite Co., Inc., The, Indianapolis, Ind.

Well Contractors. (Oil, Artesian, etc.)

Cook, A. D., Lawrenceburg, Ind.

Hughes Specialty Well Drill Co., Charleston, S. C.

Stobhoff Bros., Flemington, N. J.

Well Tools and Supplies.

Cook, A. D., Lawrenceburg, Ind.

Keystone Pump & Well Engine Co., Beaver Falls, Pa.

Williams Bros., Ithaca, N. Y.

Wheels and Axles.

Electric Wheel Co., (Mfrs.), Quincy, Ill.

Oliver Mfg. Co., W. J., Knoxville, Tenn.

Wheelbarrows and Carts.

Sterling Wheelbarrow Co., Milwaukee, Wis.

Window Frames and Sash. (Fireproof.)

Detroit Steel Products Co., Detroit, Mich.

Edwards Mfg. Co., The, Cincinnati, O.

Wagner's Sons Co., J. F., Louisville, Ky.

Window Frame Machinery.

Phillips Mfg. Co., Orlando, Fla.

Window Guards. (Wire.) [See Wire Goods.]**Windmills.**

Caldwell Co., Inc., W. E., Louisville, Ky.

Wire. (Barbed Wire, etc.)

American Steel & Wire Co., Chicago, Ill.

Cyclone Fence Co., Waukegan, Ill.

Roebling's Sons Co., John A., Trenton, N. J.

Youngstown Sheet & Tube Co., Youngstown, O.

Wire. (Galvanized and Annealed.)

American Steel & Wire Co., Chicago, Ill.

Gulf States Steel Co., Birmingham, Ala.

Wire. (Galvanized Telephone.)

American Steel & Wire Co., Chicago, Ill.

Gulf States Steel Co., Birmingham, Ala.

Wire. (Plain Steel, Hoop, etc.)

Gulf States Steel Co., Birmingham, Ala.

Wire Cloth. (Iron, Steel, Brass, etc.)

Caldwell & Sons Co., The, H. W., Chicago, Ill.

Eureka Supply Co., Chattanooga, Tenn.

Meyers Mfg. Co., The, Fred J., Hamilton, O.

New Jersey Wire Cloth Co., Trenton, N. J.

Wire Goods.</

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Chesapeake Belting Co. Chesapeake Iron Works Chesapeake Roofing & Pipe Covering Co., Inc. Chesapeake Steamship Co. Chicago Bridge & Iron Wks. Chicago House Wrecking Co. Chicago Pneumatic Tool Co. Chickamauga Quarry & Const. Co. Childrey Co., The. Church & Dwight Co. Cincinnati Frog & Switch Co. Cincinnati Iron Fence Co. Cincinnati Iron & Steel Co. Clark Co., H. W. Classified Opportunities. Clayton Air Compressor Plant Cleveland Belting & Mch. Co. Climax Mfg. Co. Clinchfield Coal Corp. Clinchfield Fuel Co. Clinchfield Portland Cement Corp. Clow & Sons, James B. Coatesville Boiler Wks. Coldwell-Wilcox Co. Cole Mfg. Co., R. D. Columbian Iron Works Columbian Rope Co. Columbus Malleable Iron Co. Comstock Electric Co. Conley Frog & Switch Co. Connant Shovel Co. Consolidation Coal Co., Inc. Converse College. Continental Gin Co. Cook, A. D. Cooper Co., C. & G. Copeland-Ingalls Shale Brick Co. Corrugated Bar Co. Cortright Metal Roofing Co. Cresson-Morris Co. Crompton & Knowles Loom Works. Crosby, Walter Wilson. Crucible Steel Casting Co. Cummer & Son Co., F. D. Cunard Steamship Co., Ltd. Cunningham Const. Co. Cunniff, George B. Curran Elevator Co., James H. Cutler Mail Chute Co. Cyclone Fence Co.	Dufur & Co. Dunn Wire-Out-Lag Brick Co. Dunning, W. D. Du Pont Fabrikoid Co. Du Pont Powder Co. Dussan & Son. E Eagle Mfg. Co. Eagle pipe supply Co., Inc. East Bangor Const. Siste Co. East St. Louis Bridge Co. Economy Engineering Co. Economy Excavator Co. Economy Fuse & Mfg. Co. Edwards, Geo. B. Edwards Mfg. Co. Electric Bond & Share Co. Electric Storage Battery Co. Electric Wheel Co. (Mfg.) Elford, E. Elrod, Henry E. Emerson Pump & Valve Co. Empire Mch. & Supply Corp. Equitable Asphalt & Maintenance Co. Erie Perforating Co. Erie Clutch & Pulley Co. Erie Foundry Co. Erie Machine Shops Ford, Bacon & Davis, Inc. Essex Hotel. Eureka Fire Hose Mfg. Co. Eureka Supply Co. Evans & Co., Victor J. Ewald Iron Co. F Fairbanks, Morse & Co. Fairbanks Steam Shovel Co. Fate, Co., J. D. 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Greiner & Whitman. Griffith & Wedge Co., The. Grimmer & Tomsaint. Grimsley, G. P. Groff Mfg. Co., F. Gruendler Patent Crusher & Pulveriser Co. Guarantee Const. Co. Gulf Refining Co. Gulf States Steel Co.	J James Mfg. Co., D. O. Jeansville Iron Works Plant. Jeffrey Mfg. Co. Jenkins Bros. Johns-Manville Co., H. W. Johnson, E. J. Johnson Bros. Jones, E. M. Jones & Laughlin Steel Co. K K. B. Pulverizer Co., Inc. K. B. Weaver Mfg. Co. Keeler Co., E. Keighly Metal Ceiling & Mfg. Co., S. Keilbolts, F. O. Kelly-Springfield Road Roller Jones, E. M. Kelly, Thos. C. Kemp Mfg. Co., C. M. Keystone Pump & Well Eng. Co. Keystone Steam Well Mch. Co. Kilbourne & Jacobs Mfg. Co. Kilby Frog & Switch Co. Killian Fire-proofing & Brick Works. Kimball, Herbert S. King Co., F. E. Kingsport Brick Corp. Kinnear Mfg. Co., The. Kirkpatrick Sand & Cement Co. Kline, Lewis T. Knowles, Morris. Kosmos Portland Cement Co., Inc. L La Belle Iron Works. Lacey, R. S. & A. B. Lackawanna Steel Co. Laclede Steel Co. Laidlaw-Dunn-Gordon Co. Lamban, Harwood. Lander, Harwood. Law & Harper Co. Law, A. M. Layne & Bowler Co. Leach & Co., A. B. Leffel & Co., James. Lehigh Portland Cement Co. Lehman, Chas. T. Lewis & Co., Henry. Levy-Morton Co. Lewis, Frederick H. Lide, Martin J. Lidgerwood Mfg. Co. Lima Locomotive Corp. Little, Inc., Arthur D. Lodge & Shipley Mach. Tool Co. Lombard Iron Works. Lone Star Culvert Co. Lookout Boiler & Mfg. Co. Louisville Fire Brick Works. Lowell Crayon Co. Lufkin Rule Co., The. Lunkenheimer Co., The. Luria Bros. Co. Luten, Daniel B. Luis, Friedr. W. Lynchburg Foundry Co.	Newman Mfg. Co. N. J. Wire Cloth Co. Newport Culvert Co., Inc. Newport Sand Bank Co., Inc. New River Co. New York Cons. Jewell Fil. Co. Niagara Falls Metal Stamping Works. Nicholson File Co. Nickerson Mfg. Co. Norfolk & Western Rwy. Nusbaum & Co., V. M. Nuveen & Co., John. O O'Brien, W. O. Oconee Brick & Tile Co. Ohio Elevator & Machine Co. Ohio Locomotive Crane Co. Ogden, O. O. Old Dominion Lumber Co. 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